WHOM DO I KNOW? EXECUTIVE NETWORK CENTRALITY AND CORPORATE REPORTING

by

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ABSTRACT

I investigate the informational role of top executive social networks by examining the association between top executive network centrality and corporate reporting choices. More centrally positioned executives might derive power from being well connected and thus be less concerned about the *ex post* penalties from the managerial labor market upon the revelation of financial misreporting. Using social network centrality measures constructed on executive biographic information, I find that chief executive officers (CEOs) and chief financial officers (CFOs) that are more centrally positioned in a network are generally more likely to engage in financial misreporting than other CEOs and CFOs. The results also reveal that the influence of CFO network centrality dominates that of CEOs in financial misreporting. Additional tests show that standard corporate governance can - at best - partially mitigate the financial misreporting associated with well-connected executives. I also examine CEO and CFO labor market consequences as a channel that links executive network centrality and the related corporate reporting. I find that well-connected CFOs are more likely to leave their current firms when financial misreporting is revealed and that their subsequent reemployment rate is higher than their less-connected peers. My findings suggest that there could be circumstances under which CFOs are more related to corporate misreporting than CEOs. This finding should be of interest to board members, shareholders, and regulators.

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CHAPTER 1

INTRODUCTION

Managers have incentives to misrepresent their firms' financial reporting.[1] However, managers' responses to these incentives are conditional on the expected costs and benefits of making a decision to misreport. Other than criminal litigation, Desai et al. (2006) and Collins et al. (2009) suggest that potential job market penalties are perhaps the greatest personal cost borne by managers when financial misreporting is revealed. Even so, studies in economics and sociology have long recognized the important role social networks play in enhancing labor market outcomes (Jackson 2009). Accordingly, top executives' personal social networks are also likely to play a role in their financial reporting choices as social networks can reduce the expected costs arising from misreporting by providing implicit labor market insurance. Relatively little is known about how top executives' social networks contribute to their reporting choices, however. In this study, I examine the association between top executives' social network positions and their corporate reporting practices. I begin by constructing top executives' personal social networks using their employment and education background and rely on the concept of network centrality to quantify an executive' social network position with respect to the entire network to which she is linked.

[1] The accounting literature suggests several motivations for why managers might engage in financial misreporting: employee bonuses, bond covenants, stakeholder motivations, stock price motivations, and career concerns (e.g., Graham et al. 2005).

Economic theory suggests that the managerial labor market would "settle up" *ex post* with managers if they bring unfavorable corporate outcomes (e.g., Fama 1980) and thus is likely to serve as a constraint to misreporting. However, the disciplinary mechanisms imposed by the managerial labor market cannot always result in a full *ex post* settling up on the part of managers (Fama 1980). Studies in labor economics and sociology suggest that an individual can use her personal connections as a source to disseminate job-related information (e.g., Granovetter 1974; Montgomery 1991; Calvo-Armengol 2004) or to influence people to obtain favorable employment (e.g., Lin et al. 1981). In the context of corporate managers, there is pervasive evidence that well-connected managers (i.e., those managers who are more centrally positioned in a network) are less constrained by the labor market than other managers (e.g., Liu 2010; Beaman and Magruder 2012; Cingano and Rosolia 2012).

The social science literature further suggests that social network position affects an individual's beliefs and behaviors. An individual who is centrally positioned in a network has higher social status and is more powerful, in that she has greater access to relevant resources and enjoys more opportunities relative to other individuals in the network. Accordingly, her view of the general situation would be more favorable than others in the network as her situation is objectively more advantageous. This would in turn affect her decisions and behaviors (Ibarra 1993; Ibarra and Andrews 1993; Mizruchi and Potts 1998; Hanneman and Riddle 2005).[2] Thus, well-connected managers might benefit from their central network positions and have lower *ex ante* risk aversion towards negative career concern arising from financial misreporting than other managers. Accordingly, I predict

[2] Recent studies in corporate finance find that CEO network centrality plays an economically significant role in corporate decisions. For instance, Faleye et al. (2014) show that firms with more central CEOs invest more in research and development and receive more and higher quality patents. El-Khatib et al. (2014) find that CEOs who are centrally positioned in the social network are powerful enough to pursue any acquisition projects, even those that have negative wealth effects on shareholders.

that more centrally positioned managers are more likely to engage in financial misreporting than their less centrally positioned peers. I consider both chief executive officers (CEOs) and chief financial officers (CFOs) in my empirical analysis, as both roles are potentially crucial in the corporate reporting process.

A related research question arises as to whose network centrality matters more in corporate reporting choices, CEOs or CFOs. Prior studies that examine the role of managers in financial reporting tend to focus on CEOs alone (e.g., Francis et al. 2008; Khanna et al. 2005) or the executive team as a whole (e.g., Bamber et al. 2010). More recent studies have started to emphasize the role of CFOs and document that CFOs' characteristics and incentives have substantial impacts on their firms' financial reporting practices (e.g., Jiang et al. 2010; Feng et al. 2011). In this study, I consider both CEOs and CFOs and distinguish their specific roles in financial reporting to enrich our understanding of how executive network centrality influences corporate reporting policies. It is unclear *ex ante* whether the role of CEO or CFO network centrality will dominate in determining financial reporting choices, as CEOs and CFOs have different job responsibilities. CFO centrality might matter more than that of CEO, as a CFO is directly responsible for financial reporting. Alternatively, CEO centrality might matter more because as the corporate leader, a CEO could set the reporting tone from the top and dominate her CFO's role.

The primary construct of interest in this study is executive social network centrality established through individual's professional and educational links. To construct my measures of centrality, I obtain executives' biographical information (past and current employment and education background information) from the BoardEx database of Management Diagnostics Ltd. Using these data, I construct annual networks considering all

managers and directors of publicly traded U.S. firms. I then use those networks to calculate the network centrality of each CEO (CFO) relying on standard centrality measures developed in social network literature. I construct two measures of centrality: *Degree* and *Eigenvector*. *Degree* centrality is the total number of executives or directors with whom an individual shares a common employment or education link and captures the *size* of an individual's network. *Eigenvector* centrality is the weighted sum of the centrality values of all others to whom an individual is connected and captures the *importance* of the individual's connections. I use three proxies for financial misreporting: accrual management, the tendency to meet analyst earnings benchmark, and the likelihood of issuing a financial report that is subsequently restated. In my main analysis, my sample covers 19,069 firm-year observations from 3,559 unique firms spanning from 2001 to 2012.

I include CEO and CFO centrality separately and jointly in my empirical specifications to investigate the specific role of CEO and CFO centrality in corporate reporting. I find a positive relation between CEO (CFO) centrality and misreporting based on accrual management and the likelihood of meeting analyst benchmark (misreporting based on all the three proxies for financial misreporting). Consistent with my prediction, my results suggest that more centrally positioned CEOs and CFOs are more likely to engage in financial misreporting than other CEOs and CFOs. My results also suggest that the impact of CFO network centrality dominates that of CEO network centrality in misreporting choices. Specifically, CFO centrality is significantly and positively associated with all three proxies for misreporting while CEO centrality is only related to two of the three proxies. Moreover, even though both CEO centrality and CFO centrality are positively associated with accrual management and the likelihood of meeting analyst benchmark, CFO centrality has higher economic significance on reporting choices than

CEO centrality. This finding, consistent with existing evidence (e.g., Mian 2001; Geiger and North 2006; Jiang et al. 2010; Ge et al. 2011), suggests that CFOs might be more influential than CEOs in financial reporting as CFOs, not CEOs, typically oversee the corporate reporting process.

I also perform several additional tests. First, I consider an alternative explanation for my findings – evidence that well-connected managers prefer to sit on misreporting firms as they could enjoy the benefits of that misreporting with implicit labor market insurance. My analysis suggests that this alternative explanation does not explain my findings. Second, I consider additional controls for executive characteristics and equity incentives in my analysis. I continue to find a significantly positive relation between executive centrality and financial misreporting. Finally, I examine whether standard corporate governance, in the form of a high percentage of independent directors, mitigates the financial misreporting associated with centrally positioned executives. In general, I find that this governance mechanism can - at best - partially mitigate financial misreporting associated with well-connected executives.

In my final analysis, I examine labor market consequence as a channel through which the relation between executive network centrality and corporate reporting holds. Specifically, I consider two labor market consequences – the likelihood of executive turnover and the subsequent reemployment rate upon the revealing of financial misreporting. Focusing on a sample of firms with financial restatements, I find that well-connected CFOs are more likely to leave their current firms when their firms experience financial restatements than less-connected CFOs. Moreover, in the sample of CFOs who leave their current employers when misreporting is revealed, the subsequent reemployment rate is higher for well-connected CFOs then their less-connected peers. The findings are

consistent with labor market theories that well-connected managers have more outside employment opportunities and more easily find alternative positions. The findings hold for CFOs but not CEOs. This might suggest that CFOs are the ones directly responsible for corporate reporting and, therefore, are more likely to be affected when their firms' misreporting is detected.

This study makes several contributions to the financial reporting literature. Its primary contribution is identifying the informational role of executive network centrality in the financial reporting process. Prior studies that examine the determinants of corporate reporting tend to focus on firm and/or industry characteristics, although more recent studies have made progress in understanding the incremental role of human factors in corporate reporting. In this area, some studies focus on managers' personal inherent attributes and document the significant role of managers' fixed effects (e.g., Bamber et al. 2010; Ge et al. 2011) and executives' underlying characteristics (e.g., Francis et al. 2008; Schrand and Zechman 2012). Other studies go beyond the manager inherent attributes and examine human factors from a social aspect. For example, Brown (2011) and Chiu et al. (2013) document that accounting-related choices spread across firms through shared common directors, while Hwang and Kim (2012) and Khanna et al. (2015) find that the relation a CEO develops with others inside her boardroom influences the occurrence of financial fraud. My study extends the literature by characterizing the effect of one particular CEO (CFO) attribute - her personal social network to other executives and directors - on corporate reporting. The findings in my study suggest an adverse side of well-connected executives in financial reporting that should be considered by a variety of stakeholders.

Second, this study explores the relation between labor market mechanisms and corporate reporting practices. Despite the importance of managerial labor market incentives

in managers' financial reporting decisions, extant studies tend to focus on the role of capital market pressure and managerial compensation incentives. As Beyer et al. (2010) highlight, our understanding of how executives' career concerns affect their financial reporting strategies is still limited. I explore this issue by considering the role of executive social network centrality in mitigating managerial labor market concerns.

Finally, this study provides evidence surrounding the question of "who matters" in corporate financial reporting, CEOs or CFOs. Prior research either focuses on the top management team as a whole or CEOs alone, with a few exceptions focusing on CFOs alone. In this study, I consider both CEOs and CFOs to enrich our understanding of their specific roles in financial reporting. Also, to the best of my knowledge, this is the first study that directly examines the role of CFO social networks on corporate reporting. Anecdotal evidence suggests that CFOs are reluctant participants in financial irregularities (e.g., Feng et al. 2011). The evidence in this study, however, suggests that there might be circumstances under which CFOs are related to financial misreporting and they even dominate the risk from CEOs. This finding should be of interest to board members, shareholders, and regulators.

The remainder of the paper is organized as follows. Chapter 2 discusses the background studies and motivation and Chapter 3 discusses hypothesis development. Chapter 4 describes the data, empirical measures, and summary statistics. Chapter 5 describes research methods and provides main results. Chapter 6 discusses future work and the last chapter summarizes the paper.

CHAPTER 2

LITERATURE REVIEW AND MOTIVATION

2.1 Social Network Literature

Social networks consist of a series of individuals and the links between those individuals that are formed through various social relationships. In this study, I define the social networks of corporate executives, where the individuals might have worked together or served together on the board of directors of another firm, have attended the same educational institutions, or have interacted on a more social level (e.g., served the same social charity/club or been members of the same golf club).

Social context (captured through social networks) as an important determinant of economic behaviors recently has received increased attention by economists. This interest stems from the realization that many economic behaviors are embedded in the networks of relationships and, thus, the structure of those networks play an important role in governing the outcomes of those economics behaviors (Jackson 2009). Recent studies in corporate finance capture an executive's or an institution's social connections and have identified both positive and negative consequences of these social connections. The results from some studies support the argument that social connections facilitate accessibility to information and relevant resources (Lin 1999). For instance, Cohen et al. (2008) find that mutual fund managers connected with corporate board members invest in better performing mutual fund portfolios; Larcker et al. (2013) document that firms with more central boards earn

higher stock returns and experience higher future performance growth; Fracassi (2014) shows that firms with more central boards of directors make better investment decisions and experience better economic performance; and Faleye et al. (2014) provide evidence that firms with more central CEOs invest more in innovation and receive higher quality patents. Those results suggest that firms with well-connected boards or managers gain better access to information and resources and make more informed decisions.

In contrast, the findings from other studies support negative consequences of socially connected boards or managers. For example, Bizjak et al. (2009) document that cross-firm board networks (interlocking boards) might prompt the spread of value-decreasing management practices in the form of option backdating. Hwang and Kim (2009) find that social ties between directors and their CEOs significantly weaken directors' monitoring and disciplinary effectiveness. Fracassi and Tate (2012) document that powerful CEOs, who are more likely to appoint directors with ties to them, weaken board monitoring and destroy firm values. In addition, El-Khatib et al. (2014) find that CEOs centrally positioned in a network become powerful enough to pursue any acquisitions, regardless of the potentially negative impact on shareholders. Those studies demonstrate the adverse consequences of social network connections in terms of corporate monitoring and information transfer. My study expands this stream of research that identifies dark side of well-connected corporate leaders by examining the association between executive connectedness and financial misreporting.

2.2 Studies in Determinants of Corporate Reporting

Managers know more about their firms' performance than capital providers and other stakeholders, leading to information asymmetry between managers and stakeholders.

Financial reporting plays an important role in reducing this information asymmetry. Capital providers not only rely on accounting information to evaluate a firm's return potential and make investment decisions, but also use accounting information to monitor the use of their committed capital (Beyer et al. 2010). Managers have incentives to misreport their information, however. For example, managers have incentives to inflate earnings to influence stock prices for contracting purpose, to meet market expectations, or to signal to other stakeholders. Numerous studies in accounting have examined firm-level (e.g., Klein 2002) or economy-level (e.g., Leuz et al. 2003; Bushman and Piotroski 2006) factors that influence the corporate reporting decisions made by managers. More recently, the incremental role of individual human factors in corporate reporting choices is beginning to attract interest among researchers. In a recent survey paper, Dichev et al. (2013), the authors survey 170 CFOs about determinants of financial reporting quality and report that a CFO suggests academics should

> … Start with the top management or senior executives. That sets the tone or culture which your internal accounting function will operate under… conduct an intensive fundamental analysis of the backgrounds of the top people running the company …look at the experience of the people behind a lot of the numbers. (Dichev et al. 2013, Page 29)

Some more recent studies have begun to consider the role of human factors in corporate reporting choices. One stream of research focuses on managers' personal inherent attributes and underlying characteristics. Several studies examine manager-fixed effects and find that top executives demographic characteristics and personal backgrounds are associated with their unique reporting styles and accounting choices (Bamber et al. 2010; Ge et al. 2011). Other studies investigate the role of managers' underlying characteristics, including executive ability, overconfidence, and reputation, and document the importance of these characteristics in explaining corporate reporting decisions (e.g., Francis et al. 2008;

Schrand and Zechman 2012; Demerjian et al. 2013). For example, Francis et al. (2008) find a negative association between CEOs' reputation, as measured by press coverage, and their firms' earnings quality. Using a sample of Internet firms, Schrand and Zechman (2012) document that overconfident executives are more likely to exhibit an optimistic bias, which leads to a greater probability of financial restatement and an SEC enforcement action. Relying on a managerial ability score that the authors develop based on firm efficiency, Demerjian et al. (2013) find that managers their measure ranks as more able are associated with fewer subsequent restatements and higher earnings quality. Overall, this stream of studies focus on a manager's personal inherent attributes.

Another stream of research considers human factors from a social aspect and examines the influence of social networks on corporate reporting practices. This research recognizes that managers do not exist in isolation and views them as being embedded in social relations and the resulting social networks. Social influence theories suggest that individuals' communication and interactions influence their beliefs and behaviors (e.g., Burt 1987). Thus, social networks are expected to influence corporate reporting practices as well. Relying on this, several papers examine the contagion effect of social networks on corporate reporting-related decisions. Those studies focus on the contagion effects via interlocking boards and have documented evidence consistent with their expectations. For instance, Brown (2011) finds that network ties via board directorships increase the likelihood of adopting aggressive corporate tax reporting policy. Chiu et al. (2013) provide evidence that a firm that shares a common director with another firm that is an earnings manipulator is more likely to manage earnings while sharing a director with non-manipulator reduces the likelihood of earnings management.

In addition to the above studies that focus on the contagion effects of cross-firm

board networks on corporate reporting practices, three recent studies examine the connections a CEO develops with others *within* her firm's boardroom. Chidambaran et al. (2012) examine how firm-level CEO-board connections are related to the likelihood of corporate fraud. The authors find that the connection between a firm's CEO and its directors built through shared employment experience lowers the incidence of fraud. The authors go on to argue that the personal connection facilitates board communication and monitoring. The findings in Chidambaran et al. (2012) support positive reporting outcomes of the relation that a CEO develops with others within her firm. In contrast, the other two studies document negative reporting outcomes of the relation that a CEO develops with others. Specifically, Hwang and Kim (2012) examine informal social ties between a firm's CEO and its auditor committee members based on their university alumni, military service, academic discipline, and regional origin. They find that these social ties weaken auditor committee's monitoring effectiveness and facilitate earnings management. Moreover, Khanna et al. (2015) study how the connections a firm's CEO develops with its other executives and directors through her appointment decisions are related to corporate fraud occurrence and detection. They document that the loyalty of the CEO-appointed executives and directors to the CEO helps to conceal fraud, reduces the likelihood of CEO dismissal, and lowers the coordination costs of conducting illegal behaviors.

Overall, the above three studies suggest that CEOs' within-firm social connections influence their financial reporting decisions and that the influences might be positive or negative, depending on how the relation is developed - through shared employment experience or through hiring decisions. However, no study has directly examined whether and how top executives' overall social network with other corporate leaders, specifically their personal social connections *outside* their current firms' boardrooms, relate to

corporate financial reporting practices. That motivates this study. This study further distinguishes from prior studies in that I consider not only CEOs but also CFOs because CFOs are directly responsible for financial reporting and might be more influential than CEOs in corporate reporting choices (e.g., Jiang et al. 2010).

2.3 Studies in Managerial Labor Market and Corporate Choices

The managerial labor market disciplines corporate managers based on their ability to bring favorable corporate outcomes (Fama 1980). Prior literature has largely focused on the determinants of CEO turnover and documented performance measures (e.g., Murphy and Zimmerman 1993) and governance structures (e.g., Yermack 1996). Recent accounting studies show that the managerial labor market disciplines managers based on their ability to anticipate and adjust to future business change as reflected in management forecast accuracy (Lee et al. 2012). Moreover, accounting studies provide evidence that corporate reporting outcomes not only serve as an important factor in determining top executive turnover but also influence terminated executives' subsequent reemployment. For instance, Desai et al. (2006) find that corporate boards fire at least some of the top managers (President, CEO, and Chairman) of firms that manipulate and subsequently restate earnings. Further, they find that it is difficult for the terminated managers to find comparable jobs. Similarly, Collins et al. (2009) trace involuntary CFO turnover following earnings restatements. They find that, relative to a control group of non-restating forms, firms restating earnings downward have significantly higher CFO turnover. They also find that former CFOs of restatement firms are less likely to find alternatives positions in publicly traded firms compared to CFOs from non-restating firms.

My paper asks a follow-up question: among those managers of firms that restate financial statements, do well-connected managers have better employment prospects than those less-connected ones? My interest to examine this follow-up question is motivated by two streams of literature. First, labor economics studies suggest that well-connected individuals can use their social connections to enhance their labor market outcomes (e.g., Granovetter 1974; Lin et al. 1981; Montgomery 1991; Calvo-Armengol 2004; Liu 2010; Beaman and Magruder 2012). Therefore, well-connected managers have less to lose because their social connections provide implicit labor market insurance. Second, prior studies examining managerial labor market consequences show that managerial labor market penalties are concentrated in less entrenched CEOs (e.g., Lee et al. 2012). Social network centrality can be viewed as a power and status and therefore, more central managers can use their power to insulate themselves from the labor market penalties. Collectively, findings from those two streams of studies suggest that, although managers of restatement firms in general face stiff future employment prospects, the employment outcomes vary with the level of executive network connectedness. In contrast, a recent study by Peters and Wagner (2014) shows that CEOs of companies experiencing volatile industry conditions are more likely to be dismissed. Based on the evidence provided in the paper, the authors suggest that an entrenchment model that suggests more powerful CEOs have lower job risk is incorrect.

My study adds to the literature that examines the role of managerial labor market concerns in corporate reporting choices by exploring the relation between executive centrality and subsequent employment prospects. This study also relates to prior studies that explore whether managers who exit their current employers can find alternative jobs. For instance, Hartzell et al. (2004) trace the future employment of target CEOs who

negotiate large cash payments in mergers and acquisitions and exit the acquiring firms at the times of acquisitions. The authors find that the majority of target CEOs who exit the acquiring firms do not obtain further employment and the authors go on to argue that a large number of them probably retire voluntarily due to their multimillion dollar gains from the merger.

CHAPTER 3

HYPOTHESIS DEVELOPMENT

3.1 Executive Centrality and Corporate Reporting

In this study, I examine the role of managers' overall social connectedness within a network consisting of business leaders in corporate reporting choices. I use the concept of network centrality to measure a manager's network position and to capture her power derived from her social connections.

I predict that more central managers are increasingly likely to engage in financial misreporting than less central managers. First**,** agency theory suggests that managers' incentives are imperfectly aligned with those of capital providers, such that corporate executives have incentives to engage in misreporting due to capital market pressure, reputation concerns, and equity incentives. Well-connected managers might have more incentives to engage in misreporting than less-connected managers, however. For instance, Malmendier and Tate (2009) find that "superstar" CEOs (those who win prestigious national awards initiated by the business media) spend more time on distracting activities and find it increasingly difficult to meet market expectations. Thus, these CEOs are more likely to manipulate earnings to maintain their image as high performers. Similarly, well-connected managers might devote more time to public and private activities outside their companies and have more motives to engage in earnings manipulation to maintain their

influential status. [3]

Second, well-connected managers have the ability to engage in accounting misreporting than less connected managers. Network centrality is viewed as a source of power and status. Individuals who are centrally positioned in the network have higher social status and are less constrained than others (e.g., Mizruchi and Potts 1998). Accordingly, the internal governance mechanisms might be less effective for central managers as the monitoring role of the board and the rest of the executive team diminishes with top executive's power (e.g., Adams et al. 2005).

Third and more importantly, managers' personal connections might reduce their *ex post* risk of engaging in financial misreporting. Managers weigh the expected costs and benefits in making financial reporting decisions. Fama (1980) predicts that the managerial labor market disciplines executives according to their estimated ability to bring favorable corporation outcomes and, thus, serves as a constraint to misreporting.[4] Empirical evidence is consistent with the labor market penalizing managers in cases of revealed misreporting. For example, Desai et al. (2006) and Collins et al. (2012) find that firms that restate their earnings experience greater top manager turnover and that the subsequent employment prospects of those displaced managers are poorer than displaced managers from non-restating firms. Similarly, Karpoff et al. (2008) show that 93% of individuals identified as responsible parties for enforcement actions for financial misrepresentation lose their jobs by the end of the regulatory enforcement period.

The revision process on the manager's estimated ability imposed by the managerial

[3] Several other studies show that powerful and influential executives are more likely to engage in financial misreporting. For example, Francis et al. (2008) find a negative association between CEOs' reputation, as measured by press coverage, and their firms' earnings quality. Badolato et al. (2014) find that managers are constrained by their firm's audit committee only when the audit committee has both financial expertise and a higher status relative to the managers' status.

[4] Managers also face the pressure from the capital market and other market-induced mechanisms.

labor market cannot always result in a full *ex post* settling up on the part of the manager (Fama 1980), however. Theoretically, a well-connected manager can use her personal network as a critical conduit in disseminating job-related information (e.g., Calvo-Armengol 2004) and/or to obtain favorable employment. Granovetter (1974) suggests that "*it's not what you know but who you know*" in job seeking and Montgomery (1991) argues that the most effective means of finding a job is through personal connections. Lin et al. (1981) show that an individual possesses a substantial advantage in the occupational attainment process if she has access to and uses resources from her social ties. More recent studies show further evidence that well-connected individuals are less likely to be disciplined by the labor market. For example, Liu (2010) provides evidence that well-connected managers are less likely to be disciplined by the managerial labor market and are likely to be quickly reemployed without decline in compensation. Cingano and Rosolia (2012) find that displaced workers' unemployment duration decreases significantly with their personal network connections with former fellow workers. Using a laboratory experiment, Beaman and Magruder (2012) find that social networks select individuals for jobs and even provide incentives to refer less-qualified individuals. Therefore, for a well-connected manager, her gain from misconduct might outweigh the anticipated labor market penalties because she can utilize the influence gained from her personal networks to mitigate the *ex post* labor market penalties. This leads to my first hypothesis:

> ***H1:*** *There is a positive association between top executive network centrality and the firm's occurrence of financial misreporting.*

It is worth noting that it is possible that well-connected managers could instead be less likely to engage in financial misreporting. Career concerns are a primary incentive for managers to engage in financial misreporting (Graham et al. 2005). According to Graham et al. (2005), a significant portion of the surveyed executives agree that their inability to

meet the market expectation is seen as a "managerial failure" and would inhibit their upward or intra-industry mobility because these managers are seen as either incompetent executives or poor performance forecasters. Socially connected managers, however, are less constrained by the labor market. Therefore, a well-connected manager might have a reduced incentive to engage in accounting misreporting than her less-connected peers, since she has fewer career concerns. Moreover, to the extent a well-connected manager cares about her financial reporting reputation since more individuals in a network consisting of corporate leaders know her, she might be less likely to engage in financial misreporting.

3.2 Whose Network Centrality Matters More

I consider both CEOs and CFOs in this study, as both types of executives are likely to play important roles in corporate reporting process. Given the prediction of a positive relation between executive network centrality and the firm's occurrence of misreporting, a related question is whose network centrality matters more in corporate reporting choices, CEOs or CFOs. While I compare the association between CEO centrality/CFO centrality and corporate reporting choices, I do not provide specific hypotheses related to this research question. On the one hand, CEO centrality might matter more because a CEO could set the tone of financial reporting from the top and dominate her CFO's role. For example, Feng et al. (2011) show that CFOs are involved in material accounting manipulations because they succumb to pressure from CEOs, rather than because they seek personal benefits from their own compensation incentives. On the other hand, CFO centrality might matter more than CEO centrality since the CFO is more directly responsible for financial reporting process than the CEO is. A few studies have examined the role of CFOs in corporate reporting and documented the important role that CFOs play.

For example, Geiger and North (2006) show that discretionary accruals decrease significantly following the appointment of a new CFO and that concurrent CEO appointments do not drive this decrease. Jiang et al. (2010) examine the role of executive equity incentives on financial reporting and find that the accrual management and the likelihood of beating analyst forecasts are more sensitive to CFO equity incentives than to those of the CEO. In addition, Ge et al. (2011) show that CFO-specific factors are statistically significant determinants of accounting choices, even after controlling for CEO style. Finally, it is also possible that CEO centrality and CFO centrality are equally important if corporate reporting choice is a decision made by a CEO and her CFO as a team. Therefore, it remains an empirical question whether CEO centrality or CFO centrality matters more in corporate reporting choices.

3.3 Executive Centrality and Labor Market Consequences

My next research question considers one possible mechanism through which top executive network centrality links to corporate reporting. Prior studies show that firms that restate their earnings experience greater top manager turnover and that the subsequent reemployment prospects of those displaced managers are poorer than displaced managers from non-restating firms (Desai et al. 2006; Collins et al. 2012). I expect the level of penalties from the managerial labor market to vary with the level of managers' connectedness, however. One principal benefit of personal social networks is to enhance the labor market outcomes. Therefore, well-connected managers might be less likely to be punished by the managerial labor market because their personal connections enhance their subsequent employment prospects. Consequently, labor market consequences are likely to

serve as a link between executive network centrality and corporate misreporting.[5]

I start by considering whether CEO and CFO turnover varies with the level of their social connectedness when financial misreporting is detected. When corporate wrongdoings are revealed, the penalties to responsible executives could range from reputation loss and displacement to criminal penalties. The turnover for well-connected CEOs and CFOs can be either higher or lower than their less-connected peers upon the revealing of financial misreporting, however. It is possible that well-connected CEOs and CFOs experience fewer turnovers because executive turnover is a firm-level decision and well-connected executives could utilize their power and influence to limit the board's ability to fire them. It is also possible that well-connected CEOs and CFOs experience higher turnover since they have more outside opportunities than less-connected others and are more likely to leave the restating firm voluntarily when their reputation is damaged. Consequently, the subsequent turnover rate upon the revealing of financial misreporting can be either higher or lower for well-connected CEOs and CFOs relative to their less-connected peers. Therefore, although I examine whether CEO and CFO turnover varies with network centrality, I do not provide specific hypotheses related to this question.

I next directly examine the reemployment outcomes for CEOs and CFOs who leave their current employers when the misreporting is detected. Studies in labor economics suggest that well-connected managers could use their social connections to transmit job-related information (i.e., an individual asks social connections about firms that are hiring managers) and/or obtain favorable employment outcomes (i.e., friends use their power to help an individual to obtain favorable employment outcome). Prior studies also show that social networks select individuals for jobs and even provide incentives to refer less

[5] I do not claim that labor market consequences are the only mechanism that links executive network centrality and financial reporting outcomes. There might be other channels through which the link holds.

qualified individuals (e.g., Beaman and Magruder 2012). Therefore, I expect that well-connected CEOs and CFOs are more likely to find alternative positions relative to their less-connected peers when they leave their current firms. Accordingly, my second hypothesis is as follows:

> ***H2****: Upon revealing of financial misreporting and departure of the current employers, more centrally positioned executives are more likely to find alternative jobs than other executives.*

CHAPTER 4

DATA, EMPIRICAL MEASURES, AND SUMMARY STATISTICS

4.1 Data

In this study, I focus on CEOs and CFOs from publicly traded U.S. firms. I obtain CEOs and CFOs biographical information from the BoardEx database of Management Diagnostics Ltd. My sample period starts from the year of 2001 because the data coverage of U.S. firms is very limited in BoardEx prior to that time (e.g., Fracassi and Tate 2012; Engelberg et al. 2013). The steps to link BoardEx data and other databases are similar to those in prior studies. I use several approaches to merge BoardEx data with CRSP/Compustat data to get PERMNOs and GVKEYs: for companies with an ISIN in BoardEx, I merge BoardEx data with CRSP/Compustat data using the CUSIP; for companies without an ISIN in BoardEx, I match the company name in BoardEx with the most recent company name in CRSP. For each firm with a valid GVKEY and PERMNO, I identify the firm's CEO and CFO during a fiscal year based on executive employment information provided in BoardEx. Specifically, I identify CEOs following BoardEx's role description (*ROLE*=CEO). I identify CFOs based on executive role description in BoardEx that includes any of the following phrases: CFO, chief financial officer, accounting, principal financial officer, and VP-finance.

BoardEx collects information on U.S. executives' and directors' current

employment, past employment, education background, and other social activities from a variety of sources, including SEC filings, corporate press releases, company websites, and media press. I rely on the information on employment and education to build executive social networks in my main analysis. I do not account for social connections established via social clubs, charities, or other organizations because BoardEx does not provide the starting date of these social activities for the majority of observations. Accordingly, inclusion of these social connections would lead to a significant loss of observations. BoardEx does not provide unique educational degree type. Instead, it lists a description of an individual's "qualification". Employing a similar approach as in Cohen et al. (2008), I manually code all degree descriptions into one of six board categories: PhDs, general masters, bachelors, MBAs, the medical school, and the law school.

I obtain firm-level financial accounting information from Compustat, stock-return information from CRSP, and analyst forecast information from I/B/E/S. Financial restatement data are obtained from Audit Analytics. I also include executive characteristics (i.e., age and gender) and executive equity incentives for a reduced sample and obtain the data from BoardEx.

4.2. Empirical Measures

4.2.1 Network Centrality

To construct a manager's social network, I exclude the manager's connections within her current firm that I am measuring financial reporting. Existing research has already documented the role of within-firm connection between a CEO and her executives or board members in financial reporting (e.g., Chidambaran et al. 2012; Hwang and Kim 2012; Khanna et al. 2014). If I define well-connected executives as those who are

connected to more people, including the connections within and outside of their current firms, then my results could simply capture the effects documented by the existing studies. I define two managers as socially connected if they are linked through at least one of the following connections:

- *Current employment connection*: two individuals work for the same company as outside board directors.
- *Past employment connection*: two individuals have worked for the same company in the top executive team or on the board in the past.
- *Education connection*: two individuals have attended the same school and graduated within one year of each other with the same type of degree.

The position of each individual in the entire network to which she is linked is not random (Jackson and Rogers 2007). The social science literature uses the concept of network centrality to quantify an individual's overall connectedness and capture her position with respect to the network to which she is connected. Although centrality is a multidimensional concept, its essence is the extent to which an individual is connected to others in the network (Mizruchi and Potts 1998). The social network literature has developed several measures of centrality to capture an individual's structural importance in a network. In this study, I employ *Degree* centrality and *Eigenvector* centrality as my empirical measures of network position.[6] *Degree* centrality measures the number of direct connections an individual has and is the most commonly used centrality measure. An

[6] There are four standard network centrality measures: *Degree, Betweenness, Closeness*, and *Eigenvector* (Bonacich 1972; Freeman 1979). Each centrality measure captures related but distinct notions of well-connectedness. *Betweenness* centrality captures how frequently an individual serves as the "bridge" between others and possesses a more critical communication position. It accounts for an individual's ability to restrict the communication of others, which is not the focus of this study. *Closeness* centrality measures how close an individual is connected to another. The communication between two individuals is more efficient with a shorter path between them. *Eigenvector* centrality assesses whether an individual's direct contacts are also well connected, which relates to the notion of *Closeness* while overcoming the shortcomings of *Closeness* centrality (Hanneman and Riddle 2005). Thus, I choose to use *Degree* and *Eigenvector* as my main empirical measures.

individual directly linked to more individuals, relative to others in the network, is viewed as more centrally positioned. Such an individual has greater opportunities and fewer constraints, which makes the individual less dependent on any specific others in the network, and hence more influential and powerful. One limitation of *Degree* measure is that it only takes into account an executive's direct connections, which implicitly assumes each connection is equally important. However, a friend's friends can be important in the social network as well. An individual's centrality is a function of the centrality of those to whom she is connected. Therefore, I employ an alternative centrality measure, *Eigenvector* centrality, which is widely used in the network literature to measure the prestige of an individual. *Eigenvector* centrality not only takes into account the number of direct links an individual has but also captures the "quality" of each link. According to *Eigenvector* centrality, an individual's centrality is the sum of the weighted values of all others to whom this individual is directly connected, with the weights being the importance of each linked person. Figure 4.1 presents an example of social network, and an illustration of *Degree* and *Eigenvector* centrality.

To calculate my centrality measures, I build an annual network for each fiscal year during my sample period running from 2001 to 2012 based on all executives and directors from publicly traded U.S. firms with biographical information available in BoardEx database.[7] I calculate *Degree* centrality and *Eigenvector* centrality for each individual in the network and then select annual measures of centrality for each CEO and CFO during my sample period. I require a firm-year observation to have both CEO network centrality and CFO network centrality available to be included in my sample in order to distinguish the

[7] I construct a CEO's (CFO's) social connections by considering all executives from publicly traded U.S. firms in all years with information available in BoardEx database, not just executives who are CEOs or CFOs or just executives who appear during my sample period.

specific roles of CEOs and CFOs.

4.2.2 Dependent Variables for H1

I consider three measures that prior studies have used when examining financial reporting behaviors: (1) the absolute values of discretionary accruals; (2) meeting or just beating analyst forecasts; and (3) financial restatements.

One widely-studied method by which managers are presumed to influence financial reporting is by managing the accrual component of earnings. Therefore, my first set of measures is accruals-related. I measure discretionary accruals based on the cross-sectional performance-matched modified Jones model (Kothari et al. 2005). I employ this model to adjust discretionary accruals by performance in order to control the potential effects from executive personal networks on firm performance (Ge et al. 2011). I measure discretionary accruals as the absolute value of the residuals from the following pooled ordinary least squares (OLS) regression based on two-digit SIC code:

$$\frac{TAccruals_{i,t}}{ASSET_{i,t-1}} = \alpha_0 + \alpha_1 \frac{1}{ASSET_{i,t-1}} + \alpha_2 \frac{\Delta SALES_{i,t} - \Delta AR_{i,t}}{ASSET_{i,t-1}} + \alpha_3 \frac{PPE_{i,t}}{ASSET_{i,t-1}} + \alpha_4 \frac{NI_{i,t}}{ASSET_{i,t-1}} + \epsilon_{i,t} \quad (4.1)$$

In the above regression, *TAccruals* is total accruals, which is the difference between net income and cash flow from operations; *ASSET* is lagged total assets; *ΔSALES* and *ΔAR* are change in sales and change in accounts receivables, respectively; *PPE* is net property, plant, and equipment; and *NI* is net income. Because earnings manipulations could involve both positive and negative values of accruals, I use the absolute value of discretionary accruals (*|DAccruals|*) in the analysis.

Prior studies recognize that accrual-related measures are not always powerful in identifying earnings manipulation (e.g., Kothari et al. 2005). Therefore, I utilize a second measure related to meeting earnings targets, particularly consensus analyst forecasts, as developed in DeGeorge et al. (1999). Compared to accruals, meeting or beating consensus analyst forecast is an outcome-based measure commonly used as a proxy for accounting discretion (e.g., Jiang et al. 2010) and is viewed as a more persuasive construct of earnings manipulation relative to the measure based on reporting small profits (Dechow et al. 2010). Following Ge et al. (2011), I define *MBAF* as an indicator variable that equals one if a firm meets or beats the latest consensus analyst forecast by three cents or less, and zero otherwise.[8]

In addition to utilizing the above two proxies as signals of opportunistic financial reporting behaviors, I also consider financial restatements which prior studies employ as an outcome-based indicator of financial misreporting. I obtain the restatement data from AuditAnalytics database. AuditAnalytics identifies three categories of financial restatements: financial frauds caused by *intentional* managerial manipulation; clerical errors caused by *unintentional* simple bookkeeping or calculation errors; and misapplication of accounting principles caused by *unintentional* errors in the application of accounting principles.[9] For the purpose of this study, I include in my main analysis those restatements related to *intentional* managerial manipulation since prior study suggests that it is important to distinguish errors from irregularities in restatement research (Hennes et al. 2008). Accordingly, I focus on those restatements classified under financial fraud or SEC investigation. I treat each firm-fiscal year as a separate observation in my analysis if a

[8] The results are qualitatively and quantitatively similar if I define "small" beat to be one or two cents.
[9] Source: http://www.auditanalytics.com/blog/restatements-where-they-come-from/

restatement involves several fiscal years.[10]

4.2.3 Dependent Variables for H2

To explore the labor market consequences as a link of executive centrality and corporate reporting choices, I consider top executive turnover upon the revealing of financial restatements and the subsequent employment rate of the departing executives. I focus on financial restatements (i.e., the restatements under financial fraud or SEC investigation categories in Audit Analytics) in this analysis because prior studies have documented that the managerial labor market penalizes executives when their firms experience financial restatements (e.g., Desai et al. 2006; Collins et al. 2012).

The initial sample of this analysis contains firm-year observations experiencing financial restatements and with CEO and CFO centrality available. To obtain data about CEO (CFO) turnover, I use BoardEx data to identify a firm's CEO and CFO at the time of the first filing of financial restatement and compare the CEO's (CFO's) name and ID number to those of the firm's CEO (CFO) two years later. If they are not the same, then I consider the firm to have experienced a CEO and/or CFO turnover. I define *CEOTurnover* (*CFOTurnover*) as an indicator variable that equals one if a firm experiences a CEO (CFO) turnover within a two-year window following the filing of a restatement, and zero otherwise.[11] Since my initial sample is already restricted to firms that experienced intentional financial restatements, I keep observations pertaining to all CEO (CFO) turnovers, not just those pertaining to forced turnovers.

I next determine whether the subsequent employment status for departing

[10] The results are unaffected if I consider only the first fiscal year when a firm experiences a financial restatement.

[11] In the analysis of the labor market consequences, I keep only the first restatement if a firm experiences multiple financial restatements in the sample.

executives varies with their network centrality. I focus on these managers who depart their current firms after their firms experience restatements and track their future labor market opportunities for up to four years since the current firm's first filing of financial restatement within my sample period. I define *CEOEmploy* (*CFOEmploy*) as an indicator variable that equals one if a departing manager finds an executive position or a director position in a publicly traded U.S. firms within a four-year window following the filing of a restatement, and zero otherwise.[12]

4.3 Summary Statistics

Table 4.1 reports summary statistics for the main variables used in the analyses.[13] Panel A provides descriptive statistics for the pooled sample. Executive centrality and firm variables are available in 19,069 firm-year observations from 3,559 unique firms. A typical CEO in my sample is connected to about one hundred and eighteen other executives and directors and a typical CFO is connected to eighty-four other individuals through their employment and education experience. The value of CEO centrality measured by *Eigenvector* is higher than that of CFO centrality as well. Since these centrality measures are highly skewed, I use the natural logarithm of the centrality variables in the later analysis. The mean firm in my sample has a market value of equity of $7.17 billion and a median market value of $831 million. This suggests my sample includes larger firms than the underlying set of public firms, since the average firm in the Compustat universe during the same period has a mean (median) market value of equity $3.02 billion ($173 million). The mean book-to-market ratio in my sample is 0.57 and the median is 0.48. Panel A also

[12] I consider a four-year window following prior studies (e.g., Collins et al. 2006). The results are qualitatively similar if I consider departing managers' future employment within a three-year or a five-year window.
[13] All continuous variables are winsorized at the 1st and 99th percentiles.

presents summary statistics for executive age and gender. Requiring this information reduces the sample size to 9,568 firm-year observations. In this sample, the average CEO is about fifty-five years old and the average CFO is about fifty years old. Around 3% of the CEOs are female while around 8% of the CFOs are female.

In Panel B of Table 4.1, I separate the full sample into high-|*DAccruals*| subsample and low-|*DAccruals*| subsample based on whether a firm's absolute value of discretionary accruals is higher than the median absolute value of discretionary accruals of all firm-year observations in my sample. I compare the mean and median values of executive network centrality across the two subsamples. The comparison suggests that CEOs (CFOs) in the high-|*DAccruals*| subsample have significantly higher network centrality than those in the low-|*DAccruals*| subsample. Panel C of Table 4.1 presents summary statistics after separating the sample into firms that meet or just beat analyst earnings target (*MBAF* subsample) and the remaining sample firms (non-*MBAF* subsample). Comparisons of the mean and median values of the two centrality measures both suggest that CEOs (CFOs) in the *MBAF* subsample have significantly higher network centrality than those in the non-*MBAF* subsample. Similarly, Panel D of Table 4.1 presents summary statistics after separating the sample into firms that experience financial restatements and those do not. The results across the two centrality measures generally suggest that CEOs (CFOs) in the restatement subsample are more centrally positioned in the network than those in the remaining sample firms.

In Table 4.2, I present correlation metrics for the main variables. Spearman correlation coefficients suggest that CEO (CFO) *Degree* centrality is significantly and positively associated with CEO (CFO) *Eigenvector* centrality with a coefficient of 0.84 (0.83), consistent with *Degree* centrality and *Eigenvector* centrality capturing related but

slightly distinct dimensions of network position. The network centrality of a firm's CEO is positively correlated with that of its CFO. Both CEO and CFO centrality are significantly and positively correlated with accrual measures, the likelihood to meet or beat earnings benchmark, and the likelihood of financial restatements. In addition, the correlation coefficients suggest that both CEO centrality and CFO centrality are positively related to firm size and firm age, while are negatively related to firm growth, capital expenditure, and return volatility. Pearson correlation coefficients suggest similar relationship as Spearman correlation coefficients do.

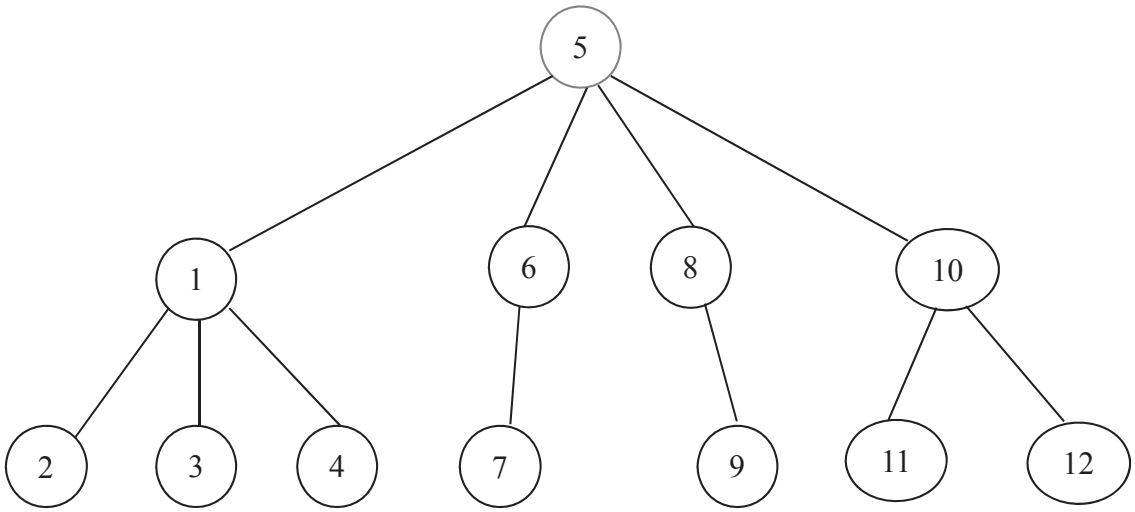

Figure 4.1
An Example of Social Network and Network Centrality

Notes: This graph shows a simple example of social network. The nodes represent individuals and lines represent the links between individuals. In this social network, node 1 and node 5 have the highest *Degree* centrality because each of them is directly linked to four others in the network. Node 5 has the highest *Eigenvector* centrality, because this individual not only directly links to more others in the network (four direct links in this example), her direct contacts are well-connected as well.

Table 4.1
Summary Statistics

Panel A: Descriptive statistics for the full sample

	Mean	P25	Median	P75	Std. dev.
Centrality Variables (N=19,069)					
CEODegree	117.62	28.00	61.00	138.00	150.77
CFODegree	83.91	18.00	38.00	88.00	127.76
CEOEigenvector	0.0031	0.0000	0.0002	0.0016	0.0153
CFOEigenvector	0.0013	0.0000	0.0001	0.0013	0.0029
Financial Reporting Variables (N=19,069)					
|DAccruals|	0.17	0.03	0.09	0.20	0.25
MBAF	0.32	0.00	0.00	1.00	0.47
Restatement	0.02	0.00	0.00	0.00	0.14
Control Variables (N=19,069)					
MVE	7172.52	264.14	831.70	2945.11	25909.98
BTM	0.57	0.29	0.48	0.73	0.42
ROA	0.02	0.01	0.04	0.08	0.14
FirmAge	21.48	9.00	15.00	31.00	15.91
Leverage	0.53	0.33	0.53	0.72	0.25
CapitalExpenditure	0.04	0.01	0.03	0.05	0.05
RetVolatility	0.03	0.02	0.03	0.04	0.01
CEOCtgDACC	0.08	0.00	0.00	0.00	0.27
CFOCtgDACC	0.09	0.00	0.00	0.00	0.29
CEOCtgMBAF	0.26	0.00	0.00	1.00	0.44
CFOCtgMBAF	0.27	0.00	0.00	1.00	0.44
CEOCtgREST	0.01	0.00	0.00	0.00	0.09
CFOCtgREST	0.01	0.00	0.00	0.00	0.09
Executive Characteristics (N=9,568)					
CEOAge	54.93	50.00	55.00	60.00	7.25
CFOAge	50.02	45.00	50.00	55.00	6.65
CEOGender	0.03	0.00	0.00	0.00	0.17
CFOGender	0.08	0.00	0.00	0.00	0.28

Table 4.1
(Continued)

Panel B: High- /*DAccruals*/ vs. low- /*DAccruals*/ subsamples

	High- /*DAccruals*/ (N=9,552)			Low- /*DAccruals*/ (N=9,517)			Differences	
	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.	Mean	Median
CEODegree	126.11	65.00	161.21	109.10	58.00	138.99	17.01***	7.00***
CFODegree	95.82	42.00	148.97	71.95	35.00	100.72	23.88***	7.00***
CEOEigenvector	0.0040	0.0003	0.0181	0.0023	0.0001	0.0116	0.0017***	0.0002***
CFOEigenvector	0.0016	0.0001	0.0032	0.0010	0.0001	0.0024	0.0006***	0.0000***
MVE	7805.01	724.62	29374.52	6,537.69	957.37	21,871.27	1267.32***	-232.75***
BTM	0.51	0.41	0.39	0.64	0.54	0.44	-0.13***	-0.12***
SalesGrowth	1.29	1.10	1.24	1.19	1.07	0.96	0.10***	0.03***
ROA	0.01	0.05	0.17	0.03	0.03	0.09	-0.02***	0.02***
FirmAge	20.45	14.00	15.60	22.51	17.00	16.15	-2.06***	-3.00***
Leverage	0.46	0.46	0.22	0.60	0.62	0.25	-0.14***	-0.16***
CapitalExpenditure	0.044	0.027	0.052	0.041	0.025	0.052	0.004***	0.002***
RetVolatility	0.031	0.028	0.015	0.027	0.024	0.014	0.004***	0.004***

Table 4.1
(Continued)

Panel C: *MBAF* vs. Non-*MBAF* subsamples

	MBAF=1 (N=6,038)			*MBAF*=0 (N=13,031)			Differences	
	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.	Mean	Median
CEODegree	134.17	68.00	168.37	109.95	59.00	141.22	24.22***	9.00***
CFODegree	101.79	43.00	154.05	75.62	36.00	112.57	26.17***	7.00***
CEOEigenvector	0.0039	0.0003	0.0172	0.0028	0.0001	0.0142	0.0011***	0.0002***
CFOEigenvector	0.0017	0.0001	0.0032	0.0012	0.0001	0.0027	0.0005***	0.0000***
MVE	12471.06	1032.76	38020.35	4717.40	744.74	17135.71	7753.66***	288.02***
BTM	0.49	0.40	0.37	0.61	0.51	0.44	-0.12***	-0.11***
SaleGrowth	1.26	1.09	1.15	1.23	1.08	1.09	0.03*	0.01***
ROA	0.03	0.04	0.13	0.01	0.03	0.14	0.02***	0.01***
NumAnalyst	9.61	8.00	7.31	7.49	6.00	6.50	2.12***	2.00***
AnalystDispersion	0.017	0.009	0.213	0.016	0.012	0.396	0.001	-0.002***
Leverage	0.50	0.50	0.25	0.54	0.55	0.24	-0.04***	-0.05***
CapitalExpenditure	0.042	0.027	0.048	0.043	0.026	0.054	-0.001	0.001***
RetVolatility	0.027	0.025	0.013	0.030	0.027	0.015	-0.003***	-0.002***

Table 4.1
(Continued)

Panel D: *Restatement* vs. Non-*Restatement* subsamples

	Restatement=1 (N=383)			*Restatement*=0 (N=18,686)			Differences	
	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.	Mean	Median
CEODegree	179.72	96.00	200.02	116.34	61.00	149.33	63.37***	35.00***
CFODegree	208.57	59.00	260.00	81.35	38.00	122.27	127.22***	21.00***
CEOEigenvector	0.0054	0.0009	0.0214	0.0031	0.0002	0.0151	0.0023***	0.0007***
CFOEigenvector	0.0027	0.0010	0.0034	0.0013	0.0001	0.0029	0.0014***	0.0009***
MVE	44694.33	1729.36	78675.72	6403.44	822.95	23001.97	38290.88***	906.42***
BTM	0.50	0.36	0.41	0.57	0.48	0.42	-0.07***	-0.12***
ROA	0.01	0.02	0.12	0.02	0.04	0.14	-0.01	-0.01***
FirmAge	24.86	18.00	18.16	21.41	15.00	15.85	3.45***	3.00***
Leverage	0.60	0.62	0.24	0.53	0.53	0.25	0.07***	0.09***
CapitalExpenditure	0.040	0.024	0.046	0.043	0.026	0.052	-0.003	-0.002
RetVolatility	0.028	0.025	0.014	0.029	0.026	0.014	-0.002**	-0.001**

Notes: This table presents the summary statistics. Panel A reports summary statistics for the full sample. In panel B, firm-year observations are classified into high- */DAccruals/* and low- */DAccruals/* subsamples based on whether a firm's absolute value of discretionary accruals is higher than the median absolute value of discretionary accruals of all observations in the full sample. In panel C, firm-year observations are classified into those meet or just beat analyst forecasts and those otherwise. In Panel D, firm-year observations are classified into those experience financial restatements and those otherwise. See Appendix for variable definitions. All continuous variables are winsorized at the 1st and 99th percentiles. ***, **, and * denote two-tailed statistical significance at the 0.01, 0.05, and 0.10 levels, respectively.

Table 4.2
Correlation Metrics

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1) */DAccruals/*		**0.041**	**0.061**	**0.067**	**0.074**	**0.150**	**0.165**	**-0.057**	**-0.208**	**0.085**	**-0.067**	**-0.336**	**0.139**	**0.170**
2) *MBAF*	**0.015**		**0.043**	**0.062**	**0.062**	**0.081**	**0.084**	**0.091**	**-0.146**	**0.094**	-0.009	**-0.073**	**0.023**	**-0.092**
3) *Restatement*	**0.072**	**0.043**		**0.043**	**0.058**	**0.042**	**0.063**	**0.060**	**-0.035**	**-0.024**	**0.022**	**0.038**	0.005	-0.016
4) *CEODegree*	**0.044**	**0.068**	**0.047**		**0.414**	**0.844**	**0.446**	**0.442**	**-0.137**	**0.051**	**0.232**	**0.040**	**0.076**	**-0.132**
5) *CFODegree*	**0.083**	**0.075**	**0.082**	**0.422**		**0.417**	**0.828**	**0.403**	**-0.114**	**0.029**	**0.179**	**0.046**	**0.057**	**-0.123**
6) *CEOEigenvector*	**0.081**	**0.082**	**0.043**	**0.838**	**0.420**		**0.584**	**0.396**	**-0.168**	**0.053**	**0.166**	**-0.061**	**0.054**	**-0.071**
7) *CFOEigenvector*	**0.109**	**0.086**	**0.066**	**0.449**	**0.820**	**0.589**		**0.382**	**-0.167**	**0.050**	**0.136**	**-0.065**	**0.062**	**-0.064**
8) *MVE*	**0.123**	**0.139**	**0.207**	**0.274**	**0.382**	**0.246**	**0.298**		**-0.305**	**0.337**	**0.404**	**0.178**	**0.129**	**-0.461**
9) *BTM*	**-0.119**	**-0.131**	**-0.023**	**-0.121**	**-0.104**	**-0.149**	**-0.150**	**-0.119**		**-0.363**	**0.083**	**0.139**	**-0.213**	**0.072**
10) *ROA*	**-0.161**	**0.059**	-0.007	**0.027**	-0.004	0.006	**-0.016**	**0.092**	**-0.135**		**0.174**	**-0.248**	**0.269**	**-0.264**
11) *FirmAge*	**-0.031**	0.004	**0.030**	**0.267**	**0.238**	**0.198**	**0.186**	**0.322**	0.006	**0.174**		**0.170**	**0.088**	**-0.325**
12) *Leverage*	**-0.160**	**-0.071**	**0.039**	**0.042**	**0.056**	**-0.071**	**-0.069**	**0.128**	**0.152**	-0.001	**0.199**		**-0.250**	**-0.218**
13) *CapitalExpenditure*	-0.008	-0.009	-0.008	**-0.033**	**-0.030**	**-0.067**	**-0.048**	**-0.017**	**-0.111**	**0.082**	-0.004	**-0.145**		**0.029**
14) *RetVolatility*	**0.120**	**-0.093**	**-0.015**	**-0.118**	**-0.111**	**-0.063**	**-0.057**	**-0.181**	**0.208**	**-0.363**	**-0.298**	**-0.150**	**0.068**	

Notes: This table presents correlation coefficients for main variables. See Appendix for variable definitions. Pearson correlations are presented below the diagonal and Spearman correlations are presented above the diagonal. The sample covers a total of 19,261 firm-year observations between fiscal years 2001 and 2012. All continuous variables are winsorized at the 1st and 99th percentiles. Bold text indicates significant at the 0.05 level or better.

CHAPTER 5

EMPIRICAL ANALYSIS AND RESULTS

5.1 Hypothesis 1 – Executive Centrality and Reporting

5.1.1 Main Analysis of Executive Centrality and Corporate Reporting

5.1.1.1 Accrual Management

I estimate the following OLS regression to test whether CEO (CFO) centrality is associated with accrual management.

$$\begin{aligned}|DAccruals| = {} & \alpha_0 + \alpha_1 CEO\ Centrality + \alpha_2\ CFO\ Centrality + \alpha_3 SIZE + \alpha_4\ BTM \\ & + \alpha_5\ SalesGrowth + \alpha_6\ ROA + \alpha_7 FirmAge + \ \alpha_8\ Leverage \\ & + \alpha_9\ CapitalExpenditure + \alpha_{10}\ RetVolatility + \alpha_{11} CEOCtgDACC \\ & + \alpha_{12}\ CFOCtgDACC + \varepsilon \qquad (5.1)\end{aligned}$$

I measure accrual management as the absolute value of discretionary accruals derived from the modified Jones model adjusted for performance. I include returns on assets (*ROA*) to control for firm performance since prior studies show an association between firm performance and discretionary accruals. For example, Dechow et al. (2011) suggest that firms are more likely to engage in accounting manipulation when experiencing performance deteriorates. I include *SalesGrowth* to control for managerial incentives to inflate earnings due to the capital market pressure (Lee et al. 2006) and firm leverage ratio (*Leverage*) to control for the pressure due to debt covenants (DeFond and Jianbalvo 1994). Other firm-specific control variables include firm size (SIZE), book-to-market ratio

(BTM), and firm age (*FirmAge*). I also consider controlling for firm risk in the analysis. Executive centrality can be viewed as a source of power and influence, which might increase managerial risk-taking in corporate decisions (Ibarra and Andrews 1993). This would in turn increase the likelihood of financial misreporting. My inclusion of capital expenditure and firm leverage in the analysis partially addresses the effect arising from risky corporate investment and debt policies. To further isolate the effect of managerial risk-taking on financial reporting choices, I control for the overall firm risk directly. Following Low (2009), I measure firm risk as the natural log of the standard deviation of daily stock returns during a fiscal year (*RetVolatility*).

Another important factor to consider is the contagion effect of social networks as it might explain the variations in corporate reporting choices. Several papers examine the contagion effect of social networks on corporate accounting-related decisions and document that both good and bad accounting choices spread through social connections (e.g., Bizjak et al. 2009; Brown 2011; Chiu et al. 2013). To address this concern, I construct contagion variables to capture the reporting behaviors of a manager's social connections. Specifically, during each year in my sample period, for each executive from a public U.S. firm in BoardEx database, I define an indicator variable that equals one if more than half of her social connections are from firms with the absolute value of discretionary accruals higher than the mean absolute value of discretionary accruals for all firms in my sample period. I then select the contagion variables for each CEO (CFO) in my sample and label them as *CEOCtgDACC* (*CFOCtgDACC)*. In addition, I include year and industry fixed effects to control for common fluctuations in financial reporting over time and across industry. Finally, I cluster robust standard errors at firm level.

Table 5.1 summarizes the OLS regression results of the accrual analysis. The first

and last three columns report regression results with *Degree* and *Eigenvector* as the centrality measure, respectively. The significantly positive coefficients on CEO centrality and CFO centrality in the first two columns suggest that CEO centrality and CFO centrality are positively associated with discretionary accruals individually. In the third column, I jointly include CEO and CFO centrality in the same regression to distinguish the special role of their social network positions. Although a firm's CEO and CFO both have incentives to engage in misreporting, it is unclear who might exert more significant influence given their different job responsibilities in a firm and the supervisor-subordinate relationship between them. The coefficient estimates on both CEO and CFO centrality remain significantly positive in the joint analysis. The size of the coefficient on CFO centrality is almost double that of the CEO centrality in the regressions of discretionary accruals, however. I conduct a F-test to compare the equality of the coefficients on *LogCEODegree* and *LogCFODegree* and find that the two coefficient estimates are statistically different from each other (*P-value*<0.05). The similar results hold when I use *Eigenvector* as my centrality measure.

I also calculate the economic significance of CEO (CFO) centrality on accrual management based on the regression results in the joint analysis. The results indicate that a one standard-deviation increase in *LogCEODegree* (*LogCEOEigenvector*) is associated with a 0.01 (0.008) increase in |*DAccruals*|, which represents 6.25% (5%) of the mean |*DAccruals*| of 0.16. The coefficient on *LogCFODegree* (*LogCFOEigenvector*) implies that a one standard-deviation increase in *LogCFODegree* (*LogCFOEigenvector*) is associated with a 0.02 (0.015) increase in |*DAccruals*|, which represents 12.5% (9.38%) of the mean |*DAccruals*| of 0.16. Those results suggest that both CEO and CFO network centrality are associated with their firm's accrual management and that CFO centrality exerts

significantly greater influence on accruals management than CEO centrality in terms of magnitude.[14]

Table 5.1 also reports that the estimated coefficients on the control variables are generally consistent with findings in prior studies. For instance, accrual management is positively related to sales growth, and is negatively related to firm performance (e.g., Lee et al. 2006). Further, the coefficient estimates on the contagion variables suggest that managers' accrual management is highly and positively related to their social peers' reporting behaviors (e.g., Chiu et al. 2013).

5.1.1.2 Meeting or just Beating Analyst Earnings Benchmark

I estimate the logistic model below to examine whether CEO (CFO) centrality is related to a firm's likelihood to meet or just beat analyst forecasts.

$$\begin{aligned} MBAF = \beta_0 &+ \beta_1 CEO\ Centrality + \beta_2\ CFO\ Centrality + \beta_3 SIZE + \beta_4\ BTM \\ &+ \beta_5\ SalesGrowth + \beta_6\ ROA + \beta_7 NumAnalyst + \beta_8 AnalystDispersion \\ &+ \beta_9\ Leverage + \beta_{10}\ CapitalExpenditure + \beta_{11}\ RetVolatility \\ &+ \beta_{12} CEOCtgMBAF + \beta_{13}\ CFOCtgMBAF \\ &+ \varepsilon \end{aligned} \qquad (5.2)$$

The dependent variable *MBAF* equals one if a firm's actual earnings per share is equal to or greater than the latest analyst consensus forecast by less than three cents, as defined in Ge et al. (2011). In the analyses, I control for firm size (*SIZE*), growth (*BTM, SalesGrowth*), firm performance (*ROA*), the number of analysts that provide earnings forecasts (*NumAnalyst*), the dispersion of the analyst forecasts (*AnalystDispersion*), the debt-to-equity ratio (*Leverage)*, and capital expenditure (*CapitalExpenditure*). I also include *RetVolatility* to control for executives' overall risk-taking behaviors and contagion

[14] I also consider the total accruals in my analysis and define it as the absolute value of *TAccruals* scaled by the lagged assets. The results are consistent with the findings using */DAccruals/* as the accrual measure.

variable *CEOCtgMBAF* (*CFOCtgMBAF*) to capture the reporting behaviors of a CEO's (CFO's) social connections as reflected in meeting analyst forecast benchmark. Finally, I include year and industry fixed effects and cluster standard errors at firm level.

I present the test results in Table 5.2. Columns one through three present the results using *Degree* centrality measure and Columns four through six present the results using *Eigenvector* centrality measure. To distinguish the influence exerted by CEO and CFO centrality on meeting and just beating analyst forecasts, I include CEO centrality and CFO centrality in the model individually and jointly. The results in both individual analysis and joint analysis indicate that CEOs and CFOs with higher network centrality are more likely to engage in earnings manipulation in the form of meeting earnings benchmark, while the magnitude of the coefficient estimate on CFO centrality is greater than that on CEO centrality. I find that the coefficients on *LogCEODegree* and *LogCFODegree* are statistically different from each other in the joint analysis when I conduct F-test to compare the equality of the two coefficient estimates (*P-value*<0.10). To further assess the impact of executive centrality on the tendency to meet analyst benchmark, I compute the marginal effects and find that a one standard deviation increase in *LogCEODegree* (*LogCEOEigenvector*) increases the probability of *MBAF* by 1.40 (1.26) percent points, which is 4.39% (3.94%) of the mean probability of 32%. [15] I also find that a one standard deviation increase in *LogCFODegree* (*LogCFOEigenvector*) increases the probability of *MBAF* by 1.99 (1.96) percent points, which is 6.22% (6.13%) of the mean probability of 32%.[16] Therefore, the results in Table 5.2 suggest that both CEO and CFO centrality are positively related to the tendency to meet analyst benchmark and that CFO centrality has

[15] 1.40 percent points= 0.013 (marginal effect) *1.075 (standard deviation of *LogCEODegree*);
1.26 percent points = 0.005 (marginal effect) * 2.522 (standard deviation of *LogCEOEigen*).
[16] 1.99 percent points= 0.018 (marginal effect) *1.108 (standard deviation of *LogCFODegree*);
1.96 percent points = 0.008 (marginal effect) * 2.448 (standard deviation of *LogCFOEigen*).

greater importance than CEO centrality. [17]

5.1.1.3 Financial Restatements

To test whether CEO (CFO) centrality is related to the likelihood of financial restatement, I run a logistic model wherein the dependent variable *Restatement* takes the value of one if a firm experiences a financial restatement and zero otherwise.[18]

$$\begin{aligned} Restatement = {} & \gamma_0 + \gamma_1 CEO\ Centrality + \gamma_2\ CFO\ Centrality + \gamma_3 SIZE + \gamma_4\ BTM \\ & + \gamma_5\ ROA + \gamma_6 FirmAge + \gamma_7\ Leverage + \gamma_8\ CapitalExpenditure \\ & + \gamma_9\ RetVolatility + \gamma_{10} CEOCtgREST + \gamma_{11}\ CFOCtgREST \\ & + \varepsilon \end{aligned} \quad (5.3)$$

I include in the analysis several firm attributes that might influence the likelihood of restatement (i.e., firm size, growth, performance, age, leverage, and risk taking) and contagion variables that capture the influence from a CEO's (CFO's) social connections. The test results are summarized in Table 5.3. The results in individual analysis suggest that across *Degree* and *Eigenvector* centrality measures, CFO centrality is positively related to a firm's tendency to issue financial statements that are subsequently restated. There is no evidence of a significant relation between CEO centrality and the likelihood of financial restatement, however. The same results hold when I jointly include CEO centrality and CFO centrality in the same regression, as shown in Columns three and six. F-test results also suggest that the coefficients on CEO centrality and CFO centrality in the joint analysis

[17] I recognize that the results in this section should be interpreted with caution as meeting or beating analyst earnings forecasts could arise from either earnings manipulation or downward guided analyst forecasts (Matsumoto 2002).

[18] I also employ AAERs as an alternative measure of accounting irregularities. A benefit of the AAER sample is that it is likely to have a lower Type I error than samples that infer misreporting from earnings-based measures such as accruals. However, the AAER sample could lead to a higher Type II error rate because many misreporting firms might be undetected due to the SEC's limited resources (Dechow et al. 2010). I define an indicator variable *AAER* which equals to one if a firm experiences an AAER and zero otherwise. The results are similar but less significant.

are statistically different from each other (*P-value*<0.001). To evaluate the economic significance, I compute the marginal effects and find that a one standard deviation increase in *LogCFODegree* (*LogCFOEigenvector*) increases the probability of financial restatement by 0.78 (0.73) percent points.[19] This is economically significant as it represents 39% (36.5%) of the mean probability of 2%.

In summary, the results in this section are consistent with my prediction. Specifically, well-connected CEOs are more likely to engage in financial misreporting, as evidenced in a firm's accrual management and the tendency to meet or beat earnings benchmark; well-connected CFOs are more likely to engage in financial misreporting as measured by all of the three reporting variables. In addition, the results suggest that the role of CFO network centrality dominates that of CEO network centrality in corporate reporting practices. This is consistent with the argument that CFOs are directly responsible for corporate financial reporting and therefore, CFOs could play a stronger role than CEOs in financial reporting (e.g., Geiger and North 2006; Jiang et al. 2010).

5.1.2 Robustness Tests

The main results above suggest that executive network centrality is positively related to corporate misreporting, consistent with my prediction. However, there are possible alternative explanations of the positive relation between executive network centrality and misreporting. For example, it is possible that well-connected CEOs and CFOs prefer to sit on firms that they anticipate to misreport, as they could enjoy the benefits of misreporting with implicit labor market insurance. If so, the positive relation may simply reflect the preference of well-connected managers for misreporting firms.

[19] 0.78 percent points= 0.007 (marginal effect) *1.108 (standard deviation of *LogCFODegree*);
0.73 percent points = 0.003 (marginal effect) * 2.448 (standard deviation of *LogCFOEigen*).

Faleye (2007) and Faleye et al. (2014) address this type of endogeneity concern by regressing the dependent variable on lagged values of the explanatory variable. Following their approach, I regress financial reporting variables three years in the future on CEO (CFO) centrality in the current year while ensuring the same CEO (CFO) remains in position during both years. A positive relation between centrality in year *t* and misreporting in year *t+3* would suggest that my results are not due to reverse causality. Table 5.4 contains the test results. As the first two columns suggest, there is still a positive relation between CEO (CFO) centrality and future accrual management. The middle two columns show that CFO centrality is positively related to the likelihood of meeting earnings benchmark and the last two columns suggest that CFO centrality is positively associated with the likelihood of financial restatements. Overall, the results in Table 5.4 are still consistent with the idea that executives centrally positioned in the network, especially CFOs, are more likely to misreport. Therefore, the reverse causality concern described above does not explain my main findings.

I also recognize that manager-fixed effects might influence managers' reporting decisions. Therefore, I add executive-specific variables including age and gender into my analysis for a reduced sample. I repeat my main analysis by including these additional variables into the regressions and present the results in Table 5.5. The results suggest that CEO centrality is positively associated with accrual management and the likelihood to meet analyst benchmark and that CFO centrality is positively related to all the three reporting variables, consistent with my main findings.[20] Finally, the coefficient estimates on executive characteristics suggest that old executives and female executives are less likely to

[20] I conduct all robustness analysis by including CEO and CFO centrality separately and jointly in the regressions. For brevity, I report the results of the joint regressions only. The untabulated results are consistent when I include CEO and CFO centrality separately in the regressions.

engage in financial misreporting, consistent with the findings in prior studies (e.g., Bamber et al. 2010; Huang et al. 2012). [21]

I next consider controlling for the role of equity incentive in financial reporting. Prior studies have provided evidence that equity compensation provides incentives for managers to engage in financial misreporting.[22] Following Armstrong et al. (2013), I include both portfolio delta (pay-performance sensitivity) and portfolio vega (risk-taking incentives) in my analysis for a reduced sample. The definitions of portfolio delta and vega follow those in Core and Guay (2002) and the estimation process follows those in Coles et al. (2006) using ExecuComp data.[23] The results are presented in Table 5.6. Consistent with my main findings, CEO centrality is positively related to accrual management and the tendency to meet earnings benchmark and CFO centrality is positively relate to all the three reporting variables. In addition, there is evidence that CFO equity incentives play a stronger role in financial misreporting than CEO equity incentives, consistent with the findings in Jiang et al. (2010).

As a further test of the robustness of my results, I employ several alternative measures of executive centrality to assure that my results are not dependent on the specific measures utilized in my main tests. First, in this paper I focus on managers' social connections outside their current firms to isolate the effect of within-firm connections because prior studies have documented the role of within-firm connections on corporate reporting choices (e.g., Chidambaran et al. 2012; Hwang and Kim 2012; Khanna et al.

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[21] For example, Bamber et al. (2010) find that female managers tend to adopt disclosure styles that are less precise and underestimate earnings, consistent with females being more risk averse than males. Huang et al. (2012) find that CEO age is negatively associated with firms meeting or beating analyst earnings forecasts and financial restatements.

[22] The empirical results on the relation between equity incentives and misreporting have been mixed. See Armstrong et al. (2013) for a summary of the various research design and results in the literature.

[23] I obtained the values of Delta and Vega from Professor Lalitha Naveen's website, where she makes the measures publicly available.

2014). As a robustness check, I build executive social network by considering all connections a manager has - both outside the firm and within the firm for which I am measuring financial reporting choices. I calculate centrality measures based on this alternative network and rerun all the analysis. The results are consistent with my main findings. I summarize the summary statistics, correlation matrices, and main regression results in Appendix B.

Second, in the main analysis, I build executive network centrality based on their employment and education experience. As the SEC requires companies to disclose executive and director employment information but not educational information, the information quality of employment data should be relatively higher than that of education. Therefore, in the additional analysis, I define two individuals as socially connected if they are linked through current or past employment only. I rerun all the tests using the employment-based centrality measures. The untabulated results are qualitatively similar to what I have found in Tables 5.1 through 5.6.

Another concern about my centrality measure is that I regard two individuals as connected in all future years once a connection is established between them, which implies that the number of executives in the annual network increases monotonically over my sample period. For instance, there are 124,586 executives in the network of year 2000, and there are 176,580 executives in the network of year 2012. To address the concern that the network size might influence the results, I scale my centrality measures by the number of individuals in the corresponding annual network and re-estimate all the regressions. The untabulated results are consistent with my main findings. [24]

[24] In this paper, I focus on managers' social connections outside their current firms to isolate the effect of within-firm connections because prior studies have documented the role of within-firm connections on corporate reporting choices (e.g., Chidambaran et al. 2012; Hwang and Kim 2012; Khanna et al. 2014). As a robustness check, I also build the executive social network by considering all connections a manager has -

5.1.3 Executive Centrality and Unintentional Restatements

In the main analysis, I test whether executive centrality is related to the likelihood of intentional financial restatements. This analysis provides evidence related to whether well-connected managers are less concerned about managerial labor market penalties than other managers. I also examine whether executive centrality is related to unintentional financial restatements. I hypothesize that well-connected managers have fewer career concerns than their less-connected peers and therefore, they might be more careless in corporate reporting practices than others. I obtain the unintentional restatement data from Audit Analytics database. Specifically, in the analysis, I include all restatements reported within Audit Analytics, excluding those classified under financial fraud or SEC investigation.

I estimate regression Model (3) with dependent variable *RestateError* equaling one if a firm experiences unintentional restatements. The results are presented in Table 5.7. As I expect, there is a positive relation between executive centrality and the likelihood of unintentional restatement. The positive relation holds for both CEOs and CFOs. The findings suggest that well-connected managers are less worried about the discipline mechanisms from the managerial labor market and thus are less rigorous in corporate reporting process than their less-connected peers.

5.1.4 The Relative Centrality between CEO and CFO

In this section, I examine whether the relation between executive centrality and misreporting varies with the relative centrality between a firm's CEO and its CFO. Network

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both outside the firm and within the firm for which I am measuring financial reporting choices. I calculate centrality measures based on this alternative network and rerun all the analysis. The results are consistent with my main findings.

centrality can be viewed as a power and status and thus, those who are more centrally positioned in a network are more influential than other individuals. Therefore, it is possible that the relative centrality between a firm's CEO and CFO matters in corporate reporting decisions. Specifically, if a CEO's (CFO's) centrality is significantly higher than her CFO (CEO), then the CEO (CFO) might play a more important role than her CFO (CEO) in corporate reporting. To test the role of relative centrality, I define an indicator variable *CEOHighDegree* (*CEOHighEigen*) that equals one if the value of *CEODegree* (*CEOEigenvector*) is greater than three times that of *CFODegree (CFOEigenvector)*. I define *CFOHighDegree* (*CFOHighEigen*) as an indicator variable that equals one if the value of *CEODegree* (*CEOEigenvector*) is smaller than that of *CFODegree* (*CFOEigenvector*). Since the mean and median values of CEO centrality are significantly higher than that of CFO centrality, the measures of relative centrality are not defined in a symmetric manner.[25] I include the two indicator variables in the analysis and present the results in Table 5.8. I find that my main findings still hold after considering the relative centrality between CEOs and CFOs. Moreover, there is no evidence that the relative centrality between CEO and CFO is associated with accrual management and the tendency to meet analyst benchmark. Although there is some evidence that the relative centrality has a positive relation with the likelihood of financial restatement, the results hold only when I use *Degree* as the centrality measure. Overall, the results in this section show no evidence that relative centrality between CEO and CFO is related to reporting choices made by well-connected managers.

[25] The cutoff values to compare relative centrality are defined based on the mean and median values of CEO and CFO centrality. The mean and median values of CEO Degree centrality are around 1.5 times of CFO Degree centrality. The mean and median values of CEO Eigenvector centrality are around 2 times that of CFO Eigenvector centrality. Therefore, I view a CEO as having high centrality relative to her CFO if the CEO's centrality is more than 3 times her CFO's centrality; I view a CFO as having high centrality relative to her CEO if the CFO's centrality is greater than her CEO's centrality. My results are qualitatively similar when I define the relative centrality slightly differently (e.g., *CEOHighDegree*=1 if *CEODegree* > 2**CFODegree*).

5.1.5 The Effect of Corporate Governance

Having identified a relation between financial misreporting and executive network centrality, I test whether the standard governance mechanism helps to mitigate this issue. Accounting research has documented the power of corporate governance to limit managers' adverse actions in corporate reporting (Bushman and Smith 2001). Therefore, it is worthwhile to study whether the relation between executive network centrality and misreporting is weaker in well-governed firms. I measure governance effectiveness by the proportion of independent outside board members. Outside directors are viewed as a key governance factor and help to mitigate managers' strategic financial reporting behavior (McVay et al. 2006). I define *IndepBoard* as an indicator variable that equals one if there is greater than 75% independent board members and zero otherwise. I determine the cutoff value of the governance variable based on its sample median.

To test the effect of corporate governance, I include the governance variable and its interaction with CEO (CFO) centrality in the regression, in addition to firm characteristics included in the main analysis. Table 5.9 summarizes the regression results. The first two columns of Table 5.9 report the governance effect on the relation between executive centrality and accrual management. The coefficient estimates on CEO and CFO centrality remain significant and those on the interaction items show no evidence that the governance mechanism in the form of a high percentage of independent board members mitigates the occurrence of misreporting associated with executive centrality. The middle two columns present the results for the tendency to meet analyst earnings benchmark. The coefficient estimates on CEO and CFO centrality remain significantly positive and the coefficient estimates on the interaction items suggest that a high percentage of outside board members does not appear to mitigate the relation between executive centrality and the tendency to

meet analyst benchmarks. The last two columns contain the results for the likelihood of financial restatements. There is still a significantly positive relation between CFO centrality and the likelihood of financial restatements after taking into account standard governance, although the interaction item of CEO centrality and governance variable is significantly and negatively associated with the likelihood of restatement. Overall, the results in Table 5.9 still suggest a significantly positive relation between executive centrality, especially CFO centrality, and financial misreporting. This indicates that standard governance in the form of a high percentage of independent directors can - at best - partially mitigate the positive relation between executive centrality and financial misreporting.

5.2 Hypothesis 2 – Labor Market Outcomes

In the above analyses, I examine the relation between executive network centrality and corporate reporting choices. The results suggest a positive relation between top executive centrality and the occurrence of corporate misreporting, especially for CFOs. In this section, I examine labor market consequences as a mechanism that links executive centrality and corporate misreporting. CEOs and CFOs weigh the expected costs and benefits in making corporate decisions. If they decide to misreport, one of the greatest personal costs upon the revealing of misreporting is the penalty from the managerial labor market. However, well-connected CEOs and CFOs are less concerned about the *ex post* penalties because their personal connections can reduce the expected costs associated with misreporting by providing implicit labor market insurance. Therefore, labor market consequences are likely to serve as a link between executive centrality and the occurrence of misreporting.

5.2.1 Executive Turnover

To evaluate the labor market outcomes, I start the analysis by exploring whether the likelihood of CEO (CFO) turnover varies with the level of social connectedness when financial misreporting is revealed. For a sample of firms experiencing financial restatements, I conduct the turnover analysis for CEOs and CFOs separately to distinguish the labor market consequences on CEOs and CFOs.[26] I estimate the following logistic models for a subsample of firm-year observations experiencing financial restatements (Model 5.4 for CEO turnover and Model 5.5 for CFO turnover):

$$CEOTurnover = \delta_0 + \delta_1 CEO\ Centrality + \delta_2 SIZE + \delta_3 ROA + \delta_4 CEOAge + \delta_5 CEOGender + \varepsilon \quad (5.4)$$

$$CFOTurnover = \delta_0 + \delta_1 CFO\ Centrality + \delta_2 SIZE + \delta_3 ROA + \delta_4 CFOAge + \delta_5 CFOGender + \varepsilon \quad (5.5)$$

The dependent variable *CEOTurnover* (*CFOTurnover*) is an indicator variable that equals one if there is a CEO (CFO) turnover within a two-year window following the firm's first filing of a restatement and zero otherwise. The main variable of interest is my centrality measure as defined previously, which shows the incremental effect of network centrality on executive turnover. I control for firm size, firm performance, executive age, and executive gender in the analysis.

The results for CEO and CFO turnover are presented in Panel A and Panel B of Table 5.10, respectively. After merging restatement sample with control variables, there are 157 firm-year observations in the sample to test CEO turnover and 158 firm-year

[26] Although the previous analysis does not show a significant relation between CEO centrality and the likelihood of financial restatements, I examine CEO labor market outcomes as well for the completeness of the analysis.

observations in the sample to test CFO turnover. In Panel A, I sort the CEO sample into observations with CEO turnover and those without, and compare the mean and median values of CEO centrality across the two subsamples. The univariate analysis suggests that CEOs that depart their current employers have significantly lower network centrality than those remain at their current firms. Consistent with the univariate analysis, the regression analysis suggests a negative relation between the likelihood of CEO turnover and CEO network centrality. The results in Panel A are consistent with findings in prior studies that well-connected CEOs are less likely to be affected by the managerial labor market (e.g., El-Khatib et al. 2014). The coefficient estimates on control variables suggest that CEOs whose firms experience poorer performance are more likely to leave their current employers than those CEOs whose firms experience better performance, consistent with the findings in prior studies that firm performance is an important factor in CEO turnover (e.g., Liu 2010).

I conduct similar analyses to examine CFO turnover for a sample of firms experiencing financial restatements. The results are presented in Panel B of Table 5.10. The comparison of mean and median values of CFO centrality based on the values of *CFOTurnover* suggests that CFOs that depart their current employers have significantly higher network centrality than those remain at their current firms. The regression analysis also suggests a positive relation between the likelihood of CFO turnover and CFO network centrality. The results suggest that well-connected CFOs are more likely to leave their current firms after their firms experience financial restatements. The different results on CEO turnover and CFO turnover as a consequence of financial restatement could be due to their different responsibilities. CEOs are responsible for their firms' overall success and failure and thus firm performance tends to be an important factor in terms of CEO turnover. In contrast, CFOs typically oversee the firms' financial reporting process and therefore are

the parties directly responsible for their firms' misreporting. When their internal reputation is damaged, well-connected CFOs are more likely to leave their current firms as they have more alternative job opportunities compared to their less-connected peers. Thus, they are more likely to leave their current employers when their firms restate financial statements.

5.2.2 Subsequent Reemployment

To directly examine whether well-connected managers have favorable labor market outcomes than less-connected others, I next test whether social connections facilitate CEOs' and CFOs' re-entry into the labor market following their departure from their current employers, as predicted in my second hypothesis. For a sample of CEOs (CFOs) departing their current firms following financial restatements, I run the below logistic regressions where the dependent variable *CEOEmploy* (*CFOEmploy*) equals one if the departing CEO (CFO) obtains a similar level of position as an executive or director at another publicly traded U.S. firms within a four-year time period following the first filing of the restatement (Model 5.6 for CEO reemployment and Model 5.7 for CFO reemployment).

$$CEOEmploy = \lambda_0 + \lambda_1 CEO\ Centrality + \lambda_2 SIZE + \lambda_3 ROA + \lambda_4 CEOAge + \lambda_5 CEOGender + \varepsilon \quad (5.6)$$

$$CFOEmploy = \lambda_0 + \lambda_1 CFO\ Centrality + \lambda_2 SIZE + \lambda_3 ROA + \lambda_4 CFOAge + \lambda_5 CFOGender + \varepsilon \quad (5.7)$$

In the analysis, I control for firm characteristics of the prior firm a CEO (CFO) works for (i.e., firm size and firm performance) and the CEO's (CFO's) characteristics (i.e., age and gender). A significantly positive coefficient estimate on the centrality measure would suggest that a well-connected manager is more likely to find alternative jobs when her current firm's financial misreporting is detected. That in turn would imply that well-

connected managers are less constrained by the external managerial labor market relative to otherwise comparable others.

I present the results for CEO reemployment in Panel A of Table 5.11, and those for CFO reemployment in Panel B of Table 5.11. My final sample to test CEO reemployment contains 82 firm-year observations and that to test CFO reemployment contains 75 firm-year observations. In Panel A, I start by separating the full sample based on whether a CEO finds a comparable job within a four-year window following the restatement, and compare the mean and median values of CEO centrality across the two subsamples. Univariate analysis shows no evidence of a significant difference in network centrality between those CEOs who find comparable jobs and those otherwise. When I use regression model (5.1) to test whether there is a positive relation between CEO network centrality and the likelihood to find a comparable job after a CEO leaves the current firm, I do not find a significant relation neither.

In Panel B of Table 5.11, I conduct similar analyses to examine CFO reemployment after they depart restating firms. When I compare the centrality values of CFOs who find comparable jobs within a four-year window following the restatement with those otherwise, I find that those CFOs who find alternative jobs have significantly higher network centrality than those who fail to find alternative positions. The regression results further show that those CFOs with higher network centrality are more likely to find comparable jobs within a four-year window following their firms' restatements. I compute the marginal effects to assess the impact of executive centrality on the likelihood of reemployment. The results suggest that a one standard deviation increase in *LogCFODegree* (*LogCFOEigenvector*) increases the probability of subsequent reemployment by 10.97

(10.37) percent points, which are economically significant. [27] The findings for CFOs' employment prospects are consistent with my second hypothesis. That is, well-connected CFOs are more likely to find alternative jobs after their firms' misreporting is detected than less-connected CFOs.

Collectively, the results in Table 5.10 and Table 5.11 suggest that well-connected CFOs are more likely to leave their current firms when their current firms restate financial statements and that after their departure, they are more likely to find alternative jobs than their less-connected peers. In contrast, the results also suggest that well-connected CEOs are less likely to leave their current firms when their firms experience restatements. For those CEOs who do leave their current employers after financial restatements, there is no significant difference between well-connected CEOs and their less-connected peers in their subsequent reemployment prospects. These findings indicate that CFOs are directly responsible for financial reporting and that well-connected CFOs have favorable employment outcomes in the managerial labor market.

[27] 10.97 percent points= 0.102 (marginal effect) *1.076 (standard deviation of *LogCFODegree*);
10.37 percent points = 0.041 (marginal effect) * 2.530 (standard deviation of *LogCFOEigenvector*).

Table 5.1
Tests of the Relation between Accruals and CEO/CFO Network Centrality

	Dependent Variable = *|DAccruals|*					
	(1)	(2)	(3)	(4)	(5)	(6)
LogCEODegree	0.018***		0.010***			
	(6.88)		(3.96)			
LogCFODegree		0.024***	0.019***			
		(8.08)	(6.71)			
LogCEOEigenvector				0.007***		0.003**
				(5.58)		(2.41)
LogCFOEigenvector					0.008***	0.006***
					(6.54)	(4.94)
SIZE	-0.009***	-0.010***	-0.010***	-0.008***	-0.008***	-0.007***
	(-3.00)	(-4.05)	(-3.87)	(-2.59)	(-2.94)	(-2.61)
BTM	-0.023***	-0.024***	-0.022***	-0.023***	-0.022***	-0.021***
	(-4.81)	(-4.84)	(-4.65)	(-4.70)	(-4.48)	(-4.27)
SalesGrowth	0.005***	0.005***	0.005***	0.005***	0.005***	0.005***
	(2.82)	(2.80)	(2.73)	(2.72)	(2.80)	(2.66)
ROA	-0.086***	-0.074***	-0.066***	-0.087***	-0.079***	-0.072***
	(-3.20)	(-2.81)	(-2.70)	(-3.24)	(-2.95)	(-2.91)
FirmAge	0.0004	0.0003	0.0003	0.000*	0.0003	0.000
	(1.63)	(1.21)	(1.34)	(1.81)	(1.34)	(1.56)
Leverage	-0.044***	-0.049***	-0.041**	-0.039**	-0.044**	-0.034**
	(-2.59)	(-2.87)	(-2.56)	(-2.33)	(-2.55)	(-2.13)
CapitalExpenditure	0.189***	0.174***	0.175***	0.189***	0.177***	0.175***
	(3.24)	(3.20)	(3.33)	(3.22)	(3.23)	(3.31)
RetVolatility	0.774***	0.756***	0.636***	0.757***	0.765***	0.648***
	(3.42)	(3.51)	(3.03)	(3.33)	(3.48)	(3.01)
CEOCtgDACC	0.384***		0.222***	0.380***		0.222***
	(21.80)		(11.49)	(21.67)		(11.51)
CFOCtgDACC		0.388***	0.270***		0.382***	0.265***
		(25.86)	(16.20)		(25.42)	(15.74)
Year/Industry Effects	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes
No. Obs.	19,069	19,069	19,069	19,069	19,069	19,069
R^2	48.03%	50.16%	53.32%	47.88%	49.77%	52.97%

Notes: This table reports the OLS regression results for the relation between accrual management and executive network centrality. See Appendix A for variable definitions. Robust *t*-statistics (in parentheses) are based on standard errors adjusted for clustering at firm level. All continuous variables are winsorized at the 1st and 99th percentiles. ***, **, and * denote statistical significance at the 0.01, 0.05, and 0.10 levels, respectively.

Table 5.2
Tests of the Relation between *MBAF* and CEO/CFO Network Centrality

	Dependent Variable =*MBAF*					
	(1)	(2)	(3)	(4)	(5)	(6)
LogCEODegree	0.356***		0.218***			
	(9.05)		(4.91)			
LogCFODegree		0.446***	0.321***			
		(9.64)	(7.19)			
LogCEOEigenvector				0.148***		0.088***
				(9.56)		(4.40)
LogCFOEigenvector					0.181***	0.142***
					(9.25)	(6.70)
SIZE	-0.062*	-0.106***	-0.040	-0.048	-0.080**	-0.014
	(-1.72)	(-2.71)	(-0.90)	(-1.38)	(-2.00)	(-0.32)
BTM	-0.332***	-0.298***	-0.312***	-0.319***	-0.267***	-0.289***
	(-6.69)	(-5.20)	(-4.86)	(-6.45)	(-4.63)	(-4.50)
SalesGrowth	0.024	0.032	0.020	0.022	0.030	0.015
	(1.03)	(0.87)	(0.53)	(0.92)	(0.81)	(0.40)
ROA	0.555**	0.183	0.261	0.549**	0.149	0.257
	(2.22)	(0.61)	(0.77)	(2.20)	(0.49)	(0.75)
NumAnalyst	0.024***	0.038***	0.022**	0.024***	0.039***	0.022**
	(3.48)	(4.53)	(2.46)	(3.41)	(4.55)	(2.43)
AnalystDispersion	-0.119	-0.138**	-0.186**	-0.109	-0.138**	-0.176**
	(-1.19)	(-2.02)	(-2.03)	(-1.22)	(-2.14)	(-2.16)
Leverage	-0.726***	-0.757***	-0.646***	-0.633***	-0.656	-0.552**
	(-4.21)	(-3.78)	(-2.92)	(-3.67)	(-3.24)***	(-2.49)
CaptialExpenditure	-1.576**	0.206	-0.991	-1.491**	0.309	-0.884
	(-2.35)	(0.25))	(-1.08)	(-2.20)	(0.38)	(-0.95)
RetVolatility	-11.430***	-17.11***	-12.924***	-12.250***	-17.435***	-13.199***
	(-3.81)	(-4.38)	(-3.02)	(-4.08)	(-4.52)	(-3.13)
CEOCtgMBAF	4.421***		3.367***	4.411***		3.398***
	(46.19)		(28.30)	(46.90)		(28.68)
CFOCtgMBAF		5.220***	4.330***		5.184***	4.324***
		(42.01)	(34.35)		(43.75)	(35.77)
Year/Industry Effects	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes
No. Obs.	19,069	19,069	19,069	19,069	19,069	19,069
Pseudo R^2	47.34%	56.56%	66.70%	47.25%	56.28%	66.66%

Notes: This table reports the logistic regression results for the relation between a firm's tendency to meet or beat earnings target and executive centrality. See Appendix A for variable definition. The first three columns use *Degree* as the centrality measure, while the last three columns use *Eigenvector* as the centrality measure. All continuous variables are winsorized at the 1st and 99th percentiles. ***, **, and * denote statistical significance at the 0.01, 0.05, and 0.10 levels, respectively.

Table 5.3
Tests of the Relation between Restatements and CEO/CFO Network Centrality

	Dependent Variable = *Restatement*					
	(1)	(2)	(3)	(4)	(5)	(6)
LogCEODegree	0.074		-0.027			
	(1.29)		(-0.45)			
LogCFODegree		0.399***	0.400***			
		(7.24)	(7.05)			
LogCEOEigenvector				0.036		10.038
				(1.38)		(-1.31)
LogCFOEigenvector					0.152***	0.170***
					(5.67)	(5.71)
SIZE	0.407***	0.294***	0.306***	0.405***	0.335***	0.353***
	(10.52)	(7.44)	(7.37))	(10.49)	(8.74)	(8.85)
BTM	0.050	0.067	0.066	0.051	0.075	0.072
	(0.62)	(0.84)	(0.81)	(0.64)	(0.93)	(0.89)
ROA	-1.038**	-0.545	-0.647	-1.043**	-0.691	-0.805*
	(-2.31)	(-1.19)	(-1.41)	(-2.33)	(-1.51)	(-1.77)
FirmAge	-0.003	-0.006	-0.005	-0.003	-0.005	-0.004
	(-0.79)	(-1.47)	(-0.32)	(-0.75)	(-1.23)	(-1.09)
Leverage	1.131***	0.242***	0.195***	1.162***	1.367***	1.295***
	(4.50)	(4.88)	(4.69)	(4.58)	(5.33)	(5.02)
CapitalExpenditure	-1.904	-1.748	-1.818	-1.799	-1.417	-1.574
	(-1.53)	(-1.37)	(-1.43)	(-1.44)	(-1.12)	(-1.24)
RetVolatility	27.324***	25.030***	25.624***	26.918***	24.564***	25.625***
	(5.18)	(4.66)	(4.74))	(5.07)	(4.59)	(4.75)
CEOCtgREST	2.990***		1.300***	2.989***		1.325***
	(13.24)		(3.82)	(13.27)		(3.88)
CFOCtgREST		3.325***	2.496***		3.268***	2.441***
		(15.32)	(7.75)		(15.00)	(7.54)
Year/Industry Effects	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes
No. Obs.	19,069	19,069	19,069	19,069	19,069	19,069
R^2	14.72%	16.59%	17.00%	14.72%	16.08%	16.57%

Notes: This table reports the logistic regression results for the relation between a firm's likelihood to experience financial restatements and executive centrality. See Appendix A for variable definition. Robust *z*-values (in parentheses) are based on standard errors adjusted for clustering at firm level. All continuous variables are winsorized at the 1st and 99th percentiles. ***, **, and * denote statistical significance at the 0.01, 0.05, and 0.10 levels, respectively.

Table 5.4
Robustness Test - Do Well-connected Managers Prefer Misreporting Firms

	Dependent Variables = *|DAccruals|*		*MBAF*		*Restatement*	
	(1)	(2)	(3)	(4)	(5)	(6)
LogCEODegree	0.006**		0.010		-0.056	
	(2.05)		(0.32)		(-0.84)	
LogCFODegree	0.015***		0.089**		0.375***	
	(4.06)		(2.49)		(5.83)	
LogCEOEigenvector		0.001		-0.011		-0.051
		(0.85)		(-0.09)		(-1.57)
LogCFOEigenvector		0.005***		0.035**		0.146***
		(3.05)		(2.42)		(4.41)
SIZE	-0.010***	-0.008**	-0.011	-0.002	0.344***	0.410***
	(-3.15)	(-2.24)	(-0.21)	(-0.03)	(7.69)	(9.40)
BTM	-0.013**	-0.011*	-0.245***	-0.240***	0.029	0.028
	(-2.13)	(-1.90)	(-6.24)	(-6.12)	(0.32)	(0.30)
SalesGrowth	0.009**	0.009**	-0.029	-0.030		
	(2.50)	(2.49)	(-1.32)	(-1.33)		
ROA	-0.110***	-0.115***	-0.034	-0.068	-0.283	-0.477
	(-3.20)	(-3.36)	(-0.17)	(-0.34)	(-0.54)	(-0.92)
NumAnalyst			0.036***	0.036***		
			(4.54)	(4.43)		
AnalystDispersion			0.028	0.027		
			(0.59)	(0.57)		
FirmAge	0.0001	0.0002			0.002	0.003
	(0.50)	(0.58)			(0.54)	(0.70)
Leverage	-0.037*	-0.032	-0.662***	-0.633***	1.403***	1.471***
	(-1.66)	(-1.44)	(-5.11)	(-4.81)	(4.88)	(5.06)
CapitalExpenditure	0.044	0.046	-2.341***	-2.285***	-1.019	-0.911
	(0.71)	(0.74)	(-4.49)	(-4.38)	(-0.76)	(-0.68)
RetVolatility	0.170	0.174	-0.066	-0.218	31.307***	31.453***
	(0.64)	(0.64)	(-0.02)	(-0.07)	(5.07)	(5.61)
CEOCtgDACC	0.145***	0.144***				
	(6.73)	(6.70)				
CFOCtgDACC	0.153***	0.150***				
	(7.98)	(7.67)				
CEOCtgMBAF			0.268***	0.274***		
			(3.78)	(3.79)		
CFOCtgMBAF			0.267***	0.259***		
			(3.80)	(3.66)		
CEOCtgREST					1.792***	1.791***
					(4.87)	(4.86)
CFOCtgREST					1.954***	1.897***
					(5.23)	(5.05)
Year/Industry Effects	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes
No. Obs.	12,071	12,071	12,071	12,071	12,071	12,071
R^2 (Pseudo R^2)	39.05%	38.87%	4.49%	4.46%	17.76%	17.28%

Notes: This table reports the results for regressions of 3-year-ahead reporting variables on executive centrality at current year. See Appendix A for variable definition. Robust *t*-values or *z*-values (in parentheses) are based on standard errors adjusted for clustering at firm level. ***, **, and * denote statistical significance at the 0.01, 0.05, and 0.10 levels, respectively.

Table 5.5
Robustness Test - Controlling for Executive Characteristics

	Dependent Variables = *|DAccruals|*		*MBAF*		*Restatement*	
	(1)	(2)	(3)	(4)	(5)	(6)
LogCEODegree	0.006*		0.121**		-0.227***	
	(1.86)		(2.04)		(-2.89)	
LogCFODegree	0.019***		0.317***		0.403***	
	(5.17)		(5.17)		(5.55)	
LogCEOEigenvector		0.001		0.052*		-0.104***
		(0.83)		(1.77)		(-2.70)
LogCFOEigenvector		0.007***		0.152***		0.171***
		(4.06)		(5.02)		(4.44)
SIZE	-0.012***	-0.009***	-0.062	-0.043	0.463***	0.505***
	(-3.52)	(-2.72)	(-0.96)	(-0.68)	(8.21)	(9.32)
BTM	-0.020***	-0.019***	-0.196**	-0.184*	0.232**	0.244**
	(-2.92)	(-2.72)	(-2.01)	(-1.89)	(2.05)	(2.18)
SalesGrowth	0.001	0.001	0.016	0.007		
	(0.63)	(0.61)	(0.19)	(0.09)		
ROA	-0.008	-0.014	0.412	0.466	0.028	-0.100
	(-0.26)	(-0.42)	(0.64)	(0.74)	(0.04)	(-0.13)
NumAnalyst			0.033***	0.033***		
			(3.00)	(2.98)		
AnalystDispersion			-0.214***	-0.174**		
			(-2.74)	(-2.34)		
FirmAge	0.0002	0.0002			-0.007	-0.006
	(0.60)	(0.68)			(-1.30)	(-1.23)
Leverage	-0.010	-0.005	-0.405	-0.370	1.320***	1.355***
	(-0.40)	(-0.19)	(-1.22)	(-1.13)	(3.82)	(3.90)
CapitalExpenditure	0.192***	0.199***	-0.527	-0.468	-3.144*	-3.001*
	(2.62)	(2.71)	(-0.37)	(-0.32)	(-1.81)	(-1.73)
RetVolatility	0.810***	0.814***	-14.573**	-14.562**	32.536***	31.868***
	(2.91)	(2.87)	(-2.14)	(-2.19)	(4.63)	(4.54)
CEOCtgDACC	0.201***	0.202***				
	(6.76)	(6.79)				
CFOCtgDACC	0.281***	0.275***				
	(13.28)	(12.81)				
CEOCtgMBAF			3.263***	3.305***		
			(18.58)	(19.14)		
CFOCtgMBAF			4.424***	4.420***		
			(24.72)	(25.77)		
CEOCtgREST					1.084**	1.215**
					(2.26)	(2.50)
CFOCtgREST					2.335***	2.244***
					(5.22)	(4.99)
CEOAge	0.001	0.001*	-0.001	-0.0001	-0.043***	-0.046***
	(1.61)	(1.76)	(-0.17))	(-0.01)	(-4.31)	(-4.64)
CFOAge	-0.001**	-0.001*	0.012	0.013	-0.057***	-0.057***
	(-2.16)	(-1.92)	(1.10)	(1.19)	(-4.84)	(-4.86)
CEOGender	0.012	0.013	0.306	0.310	-0.452	-0.430
	(0.92)	(1.01)	(0.84)	(0.86)	(-1.05)	(-1.01)
CFOGender	-0.026***	-0.026***	-0.703***	-0.708***	-0.867***	-0.894***
	(-2.72)	(-2.73)	(-3.13)	(-3.25)	(-2.60)	(-2.68)

Table 5.5
(Continued)

Year/Industry Effects	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes
No. Obs.	9,568	9,568	9,568	9,568	9,568	9,568
R^2 (Pseudo R^2)	56.47%	56.18%	66.93%	66.94%	21.44%	20.88%

Notes: This table presents the results of robustness check by additional controls for executive characteristics. See Appendix A for variable definition. Robust *t*-values or *z*-values (in parentheses) are based on standard errors adjusted for clustering at firm level. All continuous variables are winsorized at the 1st and 99th percentiles. ***, **, and * denote statistical significance at the 0.01, 0.05, and 0.10 levels, respectively.

Table 5.6
Robustness Test - Controlling for Executive Equity Incentives

	Dependent Variables =					
	|DAccruals|		*MBAF*		*Restatement*	
	(1)	(2)	(3)	(4)	(5)	(6)
LogCEODegree	0.007**		0.270***		0.049	
	(2.10)		(3.06)		(0.35)	
LogCFODegree	0.023***		0.668***		0.326**	
	(5.21)		(6.88)		(2.17)	
LogCEOEigenvector		0.001		0.093**		0.069
		(0.63)		(2.23)		(0.96)
LogCFOEigenvector		0.009***		0.283***		0.135*
		(4.09)		(6.20)		(1.70)
SIZE	-0.016***	-0.013***	-0.363***	-0.261**	0.059	0.090
	(-3.71)	(-2.95)	(-2.96)	(-2.16)	(0.42)	(0.67)
BTM	-0.010	-0.008	-0.328**	-0.280*	-0.033	0.012
	(-1.04)	(-0.89)	(-2.19)	(-1.88)	(-0.14)	(0.05)
SalesGrowth	0.005	0.005	0.234***	0.250***		
	(1.42)	(1.53)	(3.10)	(3.20)		
ROA	-0.016	-0.025	-0.220	-0.232	-0.824	-0.743
	(-0.25)	(-0.38)	(-0.22)	(-0.25)	(-0.54)	(-0.49)
NumAnalyst			0.044**	0.044**		
			(2.11)	(2.10)		
AnalystDispersion			-0.141	-0.114		
			(-0.67)	(-0.61)		
FirmAge	0.0002	0.0003			-0.006	-0.006
	(0.72)	(0.82)			(-0.61)	(-0.67)
Leverage	-0.026	-0.021	-0.259	-0.108	0.642	0.868
	(-0.82)	(-0.69)	(-0.48)	(-0.20)	(0.95)	(1.25)
CapitalExpenditure	0.138	0.152	-0.873	-0.101	0.060	1.124
	(1.48)	(1.65)	(-0.39)	(-0.04)	(0.02)	(0.34)
RetVolatility	0.572*	0.541*	-19.256*	-18.047*	10.800	8.640
	(1.82)	(1.67)	(-1.85)	(-1.74)	(0.71)	(0.56)
CEOCtgDACC	0.197***	0.198***				
	(5.34)	(5.39)				
CFOCtgDACC	0.296***	0.288***				
	(11.90)	(11.54)				
CEOCtgMBAF			3.902***	3.951***		
			(16.30)	(16.05)		
CFOCtgMBAF			5.480***	5.364***		
			(15.75)	(16.75)		
CEOCtgREST					-0.744	-0.440
					(-0.80)	(-0.48)
CFOCtgREST					3.782***	3.640***
					(5.72)	(5.58)
LogCEODelta	0.006	0.005	-0.017	-0.056	-0.345*	-0.352*
	(1.52)	(1.25)	(-0.16)	(-0.56)	(-1.83)	(-1.87)
LogCFODelta	-0.007	-0.006	0.210**	0.228**	-0.016	-0.004
	(1.63)	(-1.39)	(1.98)	(2.18)	(-0.07)	(-0.02)
LogCEOVega	-0.005	-0.005	0.201	0.165	-0.098	-0.142
	(-0.87)	(-0.97)	(1.12)	(0.96)	(-0.58)	(-0.86)
LogCFOVega	0.011**	0.011**	-0.131	-0.101	0.480*	0.497**
	(2.16)	(2.16)	(-1.34)	(-1.05)	(1.93)	(2.02)

Table 5.6
(Continued)

Year/Industry Effects	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes
No. Obs.	4,359	4,359	4,359	4,359	4,359	4,359
R^2 (Pseudo R^2)	58.75%	58.37%	67.89%	67.36%	11.20%	11.39%

Notes: This table presents the results of robustness check by additional controls for executive equity incentives. See Appendix A for variable definition. Robust *t*-values or *z*-values (in parentheses) are based on standard errors adjusted for clustering at firm level. All continuous variables are winsorized at the 1st and 99th percentiles. ***, **, and * denote statistical significance at the 0.01, 0.05, and 0.10 levels, respectively.

Table 5.7
Unintentional Restatements and CEO/CFO Network Centrality

	Dependent Variables = *RestateError*	
	(1)	(2)
LogCEODegree	0.067**	
	(2.58)	
LogCFODegree	0.075***	
	(3.00)	
LogCEOEigenvector		0.023**
		(1.97)
LogCFOEigenvector		0.061***
		(5.00)
SIZE	-0.002	-0.014
	(-0.09)	(-0.75)
BTM	0.245***	0.257***
	(6.60)	(6.91)
ROA	0.620***	0.661***
	(3.13)	(3.34)
FirmAge	-0.007***	-0.007***
	(-3.60)	(-3.58)
Leverage	0.055	0.153
	(0.53)	(1.45)
CapitalExpenditure	2.542***	2.774***
	(6.11)	(6.61)
RetVolatility	16.782***	15.799***
	(7.40)	(6.93)
CEOCtgREST	3.541***	3.489***
	(10.39)	(10.24)
CFOCtgREST	3.997***	4.031***
	(10.40)	(10.49)
Year/Industry Effects	Yes	Yes
SE Clustered by Firm	Yes	Yes
No. Obs.	18,757	18,757
R^2	8.72%	8.92%

Notes: This table reports the logistic regression results for the relation between a firm's likelihood to experience unintentional financial restatements and executive centrality. See Appendix A for variable definition. Robust *z*-values (in parentheses) are based on standard errors adjusted for clustering at firm level. All continuous variables are winsorized at the 1st and 99th percentiles. ***, **, and * denote statistical significance at the 0.01, 0.05, and 0.10 levels, respectively.

Table 5.8
Relative Centrality between CEO and CFO

	Dependent Variables = *|DAccruals|*		*MBAF*		*Restatement*	
	(1)	(2)	(3)	(4)	(5)	(6)
LogCEODegree	0.009**		0.239***		0.003	
	(2.45)		(3.11)		(0.03)	
LogCFODegree	0.020***		0.299***		0.351***	
	(5.15)		(4.05)		(3.66)	
LogCEOEigenvector		0.004**		0.078**		-0.020
		(2.23)		(2.47)		(-0.43)
LogCFOEigenvector		0.005***		0.150***		0.149***
		(2.82)		(3.93)		(3.20)
SIZE	-0.010***	-0.007***	-0.040	-0.013	0.304***	0.352***
	(-3.87)	(-2.62)	(-0.89)	(-0.28)	(7.32)	(8.80)
BTM	-0.022***	-0.021***	-0.311***	-0.288***	0.068	0.073
	(-4.66)	(-4.27)	(-4.88)	(-4.47)	(0.84)	(0.91)
SalesGrowth	0.005***	0.005***	0.020	0.015		
	(2.73)	(2.67)	(0.53)	(0.38)		
ROA	-0.066***	-0.072***	0.261	0.260	-0.562	-0.778*
	(-2.71)	(-2.89)	(0.77)	(0.76)	(-1.22)	(-1.70)
NumAnalyst			0.022**	0.022**		
			(2.46)	(2.42)		
AnalystDispersion			-0.185**	-0.174**		
			(-2.02)	(-2.13)		
FirmAge	0.0001	0.0001			-0.005	-0.004
	(1.33)	(1.58)			(-1.25)	(-1.06)
Leverage	-0.041**	-0.034**	-0.646***	-0.546**	1.182***	1.290***
	(-2.56)	(-2.13)	(-2.93)	(-2.47)	(4.62)	(5.00)
CapitalExpenditure	0.176***	0.175***	-0.997	-0.864	-1.946	-1.580
	(3.33)	(3.31)	(-1.09)	(-0.93)	(-1.52)	(-1.24)
RetVolatility	0.638***	0.646***	-12.942***	-13.197***	25.222***	25.60***
	(3.05)	(3.01)	(-3.04)	(-3.11)	(4.64)	(4.74)
CEOCtgDACC	0.222***	0.222***				
	(11.48)	(11.50)				
CFOCtgDACC	0.269***	0.265***				
	(16.20)	(15.75)				
CEOCtgMBAF			3.366***	3.396***		
			(28.13)	(28.85)		
CFOCtgMBAF			4.332***	4.322***		
			(34.15)	(35.58)		
CEOCtgREST					1.380***	1.332***
					(4.18)	(3.91)
CFOCtgREST					2.502***	2.431***
					(8.01)	(7.52)
CEOHighDegree	-0.002		-0.033		0.439**	
	(-0.30)		(-0.28)		(2.33)	
CFOHighDegree	-0.004		0.048		0.474***	
	(-0.72)		(0.32)		(2.65)	
CEOHighEigen		-0.001		0.121		0.051
		(-0.16)		(0.95)		(0.28)
CFOHighEigen		0.006		0.060		0.162
		(1.04)		(0.43)		(1.02)

Year/Industry Effects	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes
No. Obs.	19,069	19,069	19,069	19,069	19,069	19,069
R^2 (Pseudo R^2)	53.32%	52.98%	66.70%	66.66%	17.39%	16.60%

Notes: This table presents the results of relative centrality analysis. See Appendix A for variable definition. Robust *t*-values or *z*-values (in parentheses) are based on standard errors adjusted for clustering at firm level. All continuous variables are winsorized at the 1st and 99th percentiles. ***, **, and * denote statistical significance at the 0.01, 0.05, and 0.10 levels, respectively.

Table 5.9
The Effect of Corporate Governance

	Dependent Variables = *|DAccruals|*		*MBAF*		*Restatement*	
	(1)	(2)	(3)	(4)	(5)	(6)
LogCEODegree	0.011***		0.181***		-0.001	
	(3.62)		(2.97)		(-001)	
LogCFODegree	0.019***		0.259***		0.607***	
	(5.38)		(4.35)		(3.46)	
Indepboard	0.001		-1.248***		1.863	
	(0.03)		(-3.00)		(1.23)	
*IndepBoard*LogCEODegree*	-0.002		0.075		0.140	
	(-0.45)		(1.01)		(0.80)	
*IndepBoard*LogCFODegree*	0.001		0.208***		-0.781**	
	(0.11)		(2.68)		(-2.39)	
LogCEOEigen^{+}		0.003*		0.078***		-0.046
		(1.94)		(2.86)		(-0.89)
LogCFOEigen^{+}		0.007***		0.142***		0266***
		(4.45)		(5.10)		(3.52)
Indepboard		-0.02		0.422		-2.439*
		(-1.17)		(1.13)		(-1.70)
*IndepBoard*LogCEOEigen*$^{+}$		0.001		0.024		0.146*
		(0.37)		(0.71)		(1.80)
*IndepBoard*LogCFOEigen*$^{+}$		-0.003		0.038		-0.339**
		(-1.28)		(1.01)		(-2.27)
SIZE	-0.011***	-0.007**	-0.063	-0.030	0.301***	0.355****
	(-3.89)	(-2.55)	(-1.39)	(-0.66)	(3.11)	(2.98)
BTM	-0.022***	-0.020***	-0.306***	-0.279***	0.122	0.112
	(-4.42)	(-4.00)	(-4.71)	(-4.20)	(0.83)	(0.75)
SalesGrowth	0.006***	0.005***	0.031	0.027		
	(2.81)	(2.76)	(0.81)	(0.71)		
ROA	-0.060**	-0.067**	0.232	0.223	-0.935	-1.127
	(-2.32)	(-2.53)	(0.67)	(0.63)	(-1.48)	(-1.58)
NumAnalyst			0.023***	0.023**		
			(2.60)	(2.54)		
AnalystDispersion			-0.183**	-0.173**		
			(-2.13)	(-2.16)		
FirmAge	0.0004	0.001*			-0.002	-0.001
	(1.52)	(1.77)			(-0.19)	(-0.08)
Leverage	-0.044***	-0.036**	-0.639***	-0.530**	1.140**	1.360**
	(-2.62)	(-2.17)	(-2.75)	(-2.27)	(2.03)	(2.25)
CapitalExpenditure	0.195***	0.195***	-1.027	-0.915	-2.986	-2.870
	(3.57)	(3.57)	(-1.08)	(-0.95)	(-1.15)	(-1.08)
RetVolatility	0.717***	0.732***	-12.033***	-12.564***	22.692**	22.799**
	(3.34)	(3.32)	(-2.75)	(-2.90)	(2.52)	(2.48)
CEOCtgDACC	0.222***	0.222***				
	(10.98)	(10.94)				
CFOCtgDACC	0.273***	0.268***				
	(15.64)	(15.22)				
CEOCtgMBAF			3.381***	3.420***		
			(28.13)	(28.57)		
CFOCtgMBAF			4.402***	4.383***		
			(33.99)	(35.40)		

Table 5.9
(Continued)

CEOCtgREST					1.379***	1.371***
					(2.89)	(3.73)
CFOCtgREST					2.507***	2.468***
					(5.07)	(5.06)
Year/Industry Effects	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes
No. Obs.	18,161	18,161	18,161	18,161	18,161	18,161
R^2 (Pseudo R^2)	53.64%	53.27%	67.09%	66.98%	20.19%	19.25%

Notes: This table summarizes the regression results for the relation between executive centrality and corporate reporting considering standard governance mechanism. See Appendix A for variable definitions. Robust *t*-values or *z*-values (in parentheses) are based on standard errors adjusted for clustering at firm level. All continuous variables are winsorized at the 1st and 99th percentiles. ***, **, and * denote statistical significance at the 0.01, 0.05, and 0.10 levels, respectively.

+ This variable is abbreviated for presentation purposes.

Table 5.10
Labor Market Consequences - Executive Turnover

Panel A: CEO turnover and network centrality

A1: CEO turnover vs. Non-CEO turnover subsamples

	CEOTurnover=1 (N=101)			*CEOTurnover*=0 (N=56)			Differences	
	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.	Mean	Median
CEODegree	88.62	52.00	137.37	166.98	84.50	205.34	-78.36**	-32.50***
CEOEigenvector	0.0101	0.0001	0.0865	0.0257	0.0003	0.1117	-0.0156	-0.0252*

A2: Regression of CEO turnover

	Dependent Variable = *CEOTurnover*	
LogCEODegree	-0.823*** (-3.47)	
LogCEOEigenvector		-0.163** (-1.99)
SIZE	0.142 (1.12)	-0.030 (-0.27)
ROA	-5.461** (-2.17)	-4.091* (-1.79)
CEOAge	-4.511*** (-3.13)	-4.041*** (-2.93)
CEOGender	1.852 (1.63)	1.864*** (2.83)
No. Obs.	157	157
Pseudo R^2	18.06%	13.14%

Table 5.10
(Continued)

Panel B: CFO turnover and network centrality

B1: CFO turnover vs. Non-CFO turnover subsamples

	CFOTurnover=1 (N=102)			*CFOTurnover*=0 (N=56)			Differences	
	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.	Mean	Median
CFODegree	142.48	71.00	175.32	75.45	29.50	146.10	67.03***	41.50***
CFOEigenvector	0.0150	0.0003	0.0833	0.0166	0.0001	0.1162	-0.0016	0.0002***

B2: Regression of CFO turnover

	Dependent Variable = *CFOTurnover*	
LogCFODegree	0.644*** (2.96)	
LogCFOEigenvector		0.153* (1.86)
SIZE	0.039 (0.30)	0.152 (1.26)
ROA	0.369 (0.24)	-0.105 (-0.07)
CFOAge	4.241*** (3.19)	3.910*** (3.05)
CFOGender	-1.276 (-1.58)	-1.448 (-1.85)*
No. Obs.	158	158
Pseudo R^2	16.10%	13.15%

Notes: This table summarizes the analysis for the relation between executive centrality and executive turnover following financial restatements. Panel A presents the results for CEO turnover and Panel B presents the results for CFO turnover. See Appendix A for variable definitions. All continuous variables are winsorized at the 1st and 99th percentiles. ***, **, and * denote statistical significance at the 0.01, 0.05, and 0.10 levels, respectively.

Table 5.11
Labor Market Consequences - Subsequent Reemployment

Panel A: CEO reemployment and network centrality

A1: CFO reemployment vs. Non- CFO reemployment subsamples

	CEOEmploy =1 (N=58)			*C EOEmploy* =0 (N=24)			Differences	
	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.	Mean	Median
CEODegree	99.12	57.00	168.35	91.17	50.00	89.17	7.95	7.00
CEOEigenvector	0.0165	0.0002	0.1141	0.0021	0.0002	0.0042	0.0144	0.1139

A2: Regression of CEO reemployment

	Dependent Variable = *CEOEmploy*	
LogCEODegree	-0.396 (-1.29)	
LogCEOEigenvector		-0.037 (-0.32)
SIZE	0.348* (1.86)	0.248 (1.42)
ROA	1.718 (1.27)	1.921 (1.42)
CEOAge	-0.058 (-1.40)	-0.053 (-1.27)
CEOGender	0.223 (1.17)	0.236 (1.23)
No. Obs.	82	82
Pseudo R^2	9.31%	7.60%

Table 5.11
(Continued)

Panel B: CFO reemployment and network centrality

B1: CFO reemployment vs. Non- CFO reemployment subsamples

	CFOEmploy=1 (N=52)			*CFOEmploy* =0 (N=23)			Differences	
	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.	Mean	Median
CFODegree	191.62	105.50	219.64	81.09	51.00	67.67	110.53***	54.50**
CFOEigenvector	0.0282	0.0011	0.1156	0.0010	0.0002	0.0022	0.0272*	0.0009**

B2: Regression of CFO reemployment

	Dependent Variable = *CFOEmploy*	
LogCFODegree	0.542* (1.72)	
LogCFOEigenvector		0.220* (1.73)
SIZE	0.218 (1.16)	0.258 (1.44)
ROA	2.261 (0.86)	2.293 (0.90)
CFOAge	-0.006 (-0.17)	-0.015 (-0.42)
CFOGender	0.283 (0.86)	0.325 (0.99)
No. Obs.	75	75
Pseudo R^2	10.63%	10.85%

Notes: This table summarizes the analysis for the relation between executive centrality and the subsequent reemployment of managers who depart their current firms following financial restatements. Panel A presents the results for CEO reemployment and Panel B presents the results for CFO reemployment. See Appendix A for variable definitions. All continuous variables are winsorized at the 1st and 99th percentiles. ***, **, and * denote statistical significance at the 0.01, 0.05, and 0.10 levels, respectively.

CHAPTER 6

FUTURE WORK

I note several caveats related to this study that need to be addressed in future research. First, the results in this study show that more central CEOs and CFOs are more likely to engage in financial misreporting than others. My sample in the study tends to include large public firms, however. It is unclear whether the results can be generalized to small firms.[28] In future work, I plan to supplement my current sample with small size firms and examine whether there are variations across firms of different sizes.

Second, the sample sizes in the analysis to examine the labor market consequences are small since my initial sample starts from observations experiencing intentional restatements in Audit Analysis database. The sample sizes are further reduced when I rely on BoardEx data to identify executive turnover and subsequent reemployment. That might affect the statistical power of the analysis. In future research, I will supplement the current restatement data with accounting irregularities from other data sources to enlarge the sample size. I also plan to manually collect data from corporate filings along with media sources such as Wall Street Journal articles to supplement BoardEx data in identifying executive turnover and reemployment.

[28] The correlation coefficients in Table 4.2 show that large firms tend to have more central CEOs and CFOs than small firms. It is possible that for small firms with less central CEOs and CFOs, increase in their network centrality could be beneficial in corporate reporting.

Finally, managerial quality could be correlated with executive centrality and thus serve as a potential alternative explanation of my findings. An able executive has more opportunities to serve as an outside director and to work for a new employer, which in turn increases her centrality. Executive quality is unobservable and hard to quantify, however. Those studies that do examine the relation between managerial quality and earnings quality reach inconsistent conclusions using different measures. For instance, using press coverage as a measure of managerial reputation, Francis et al. (2008) find a negative association between CEOs' reputations. In contrast, Demerjian et al. (2013) find that more able managers are associated with fewer subsequent restatements and higher earnings quality then other managers, using managerial ability score based on managers' efficiency in transforming corporate resources to revenues. Moreover, existing measures of managerial ability and power tend to focus on CEOs (e.g., Francis et al. 2008; Demerjian et al. 2012), while no study has directly measure CFO quality. This makes it very challenging to address executive ability as an alternative explanation in this study as I focus on both CEOs and CFOs. Therefore, future research needs to consider how to effectively quantify CEO and CFO ability and address managerial quality as an alternative explanation.

CHAPTER 7

CONCLUSION

Using network centrality measures built from executives' employment and education background, this study investigates the informational role of executives' personal social connections on corporate reporting choices. The main results suggest that executive social network position exerts significant influence on corporate reporting choices. Specifically, well-connected CEOs and CFOs are associated with a higher occurrence of financial misreporting, with CFOs having greater impact then CEOs. The results are robust to several robustness checks. Additional analysis suggests that standard corporate governance is only able to exert limited monitoring role on well-connected CEOs and CFOs in corporate reporting practices.

I also examine labor market consequences as a channel through which the link between executive centrality and corporate reporting choices holds. Specifically, I examine whether executive network centrality is related to executive turnover and the subsequent reemployment prospects following employment termination at a current job when the financial misreporting is revealed. The results suggest that well-connected CFOs are more likely to leave their current employers when their wrongdoings are revealed and that their subsequent reemployment rate is higher than their less-connected peers. In contrast, the analysis on labor market consequences shows no evidence that the level of CEO connectedness is related to the subsequent reemployment prospects when their firms'

financial restatements are revealed.

Collectively, the results in this paper suggest that well-connected CFOs are less concerned about the *ex post* penalties from the managerial labor market because their social connections enhance their employment outcomes when their wrongdoings are detected. Therefore, well-connected CFOs are more likely to engage in financial misreporting. The findings on the significant role of CFO network centrality on misreporting are consistent with social science studies that interpret positional centrality as a source of social power and status (e.g., Mizruchi and Potts 1998) and that the monitoring role of the board diminishes with top executives' power (Admas et al. 2005).

This study complements prior studies that examine the role of human factors in corporate reporting by focusing on the relations a manager develops with other business leaders. The focus on a CEO's (CFO's) connectedness with other executives and directors outside of her current firms distinguishes this study from related studies that focus on social ties within a firm's boardroom (e.g., Chidambaran et al. 2012; Hwang and Kim 2012; Khanna et al. 2014). The findings in this study imply that although there are potential benefits associated with executive personal connections as suggested in prior studies (e.g., Cohen et al. 2008; Fracassi 2014; Faleye et al. 2014), there are also magnifying agency problems in financial reporting associated with well-connected executives. The standard governance mechanism seems to have a limited role in mitigating this agency problem. More importantly, the findings indicate the substantial influence of CFOs in corporate reporting choice and suggest that there might be circumstances under which CFOs are related to financial misreporting and that they even dominate the risk from CEOs. The findings should be of interest to board of directors, shareholders, and other stakeholders.

APPENDIX A

VARIABLE DEFINITIONS

Variable Name	**Variable Definition**
LogCEODegree	The natural logarithm of the total number of executives or directors with whom a CEO shares a common employment or education link. $Degree_i = \log(\sum_j \delta_{ij})$, where δ_{ij} equals one if there is a link between individual *i* and *j* and zero otherwise.
LogCFODegree	The natural logarithm of the total number of executives or directors with whom a CFO shares a common employment or education link. *Degree* is defined in the same way as above.
LogCEOEigenvector	The natural logarithm of a CEO's *Eigenvector* centrality. It measures whether a CEO's direct connections are well-connected as well. It is calculated as $Eigenvector_i = \log\left(\frac{1}{\lambda}\sum_j A_{ij}\ Eigenvector_j\right)$, where λ is the proportionality factor and A_{ij} is an adjacency matrix.
LogCFOEigenvector	The natural logarithm of a CFO's *Eigenvector* centrality. *Eigenvector* is defined in the same way as above.
|DAccruals|	Discretionary accrual is measured as absolute value of the residuals from the following pooled regression based on two-digit SIC code: $\frac{TAccruals_{i,t}}{ASSET_{i,t-1}} = \alpha_0 + \alpha_1 \frac{1}{ASSET_{i,t-1}} + \alpha_2 \frac{\Delta SALES_{i,t} - \Delta AR_{i,t}}{ASSET_{i,t-1}} + \alpha_3 \frac{PPE_{i,t}}{ASSET_{i,t-1}} + \alpha_4 \frac{NI_{i,t}}{ASSET_{i,t-1}} + \epsilon_{i,t}$ where *TAccruals* is total accruals which equal the difference between net income and cash flow from operations; *ASSET* is the lagged total assets; *ΔSALES* and *ΔAR* are the change in sales and change in accounts receivables, respectively; *PPE* is the net property, plant, and equipment, and *NI* is net income.

Variable Name	**Variable Definition**
MBAF	An indicator variable that equals one if a firm's actual earnings per share is equal to or greater than the latest analyst consensus mean forecast by three cents or less, zero otherwise.
Restatement	An indicator variable that equals one if a firm reports accounting information that is later restated and considered as financial fraud or subject to SEC investigation, zero otherwise.
RestateError	An indicator variable that equals one if a firm unintentionally reports accounting information that is later restated (i.e., exclude those classified as financial fraud or subject to SEC investigation), zero otherwise.
CEOTurnover	An indicator variable that equals one if a firm experiences a CEO turnover within a two-year window following the filing of a restatement, zero otherwise.
CFOTurnover	An indicator variable that equals one if a firm experiences a CFO turnover within a two-year window following the filing of a restatement, zero otherwise.
CEOEmploy	An indicator variable that equals one if a departing CEO finds alternative job within a four-year window following the filing of a restatement, and zero otherwise.
CFOEmploy	An indicator variable that equals one if a departing CFO finds alternative job within a four-year window following the filing of a restatement, and zero otherwise.
SIZE	The natural logarithm of a firm's market value of equity (*MVE*), where *MVE* is the end-of-year price per share multiplied by the number of shares outstanding at year-end.
BTM	A firm's book value of equity scaled by its market value of equity.
SalesGrowth	A firm's sales in year *t* divided by sales in year *t-1*.
ROA	A firm's net income scaled by its total assets.
Leverage	A firm's total liabilities scaled by its total assets.
FirmAge	The number of years that a firm appears on Compustat database.
NumAnalyst	Number of analysts that contribute to the forecast consensus.
AnalystDispersion	Standard deviation of analysts' forecasts contributing to the consensus divided by the median forecast.
CapitalExpenditure	A firm's capital expenditure scaled by its total assets.
RetVolatility	The natural logarithm of standard deviation of a firm's daily stock return during a fiscal year.
CEOCtgDACC	An indicator variable that equals one if more than half of a CEO's social connections are from firms with $\|DAccruals\|$ higher than the mean $\|DAccruals\|$ for all firms in my sample period, zero otherwise.
CFOCtgDACC	An indicator variable that equals one if more than half of a CFO's social connections are from firms with $\|DAccruals\|$ higher than the mean $\|DAccruals\|$ for all firms in my sample period, zero otherwise.

Variable Name	Variable Definition
CEOCtgMBAF	An indicator variable that equals one if more than half of a CEO's social connections are from firms that meet or just beat analyst earnings benchmark, zero otherwise.
CFOCtgMBAF	An indicator variable that equals one if more than half of a CFO's social connections are from firms that meet or just beat analyst earnings benchmark, zero otherwise.
CEOCtgREST	An indicator variable that equals one if more than half of a CEO's social connections are from firms that experience restatements, zero otherwise.
CFOCtgREST	An indicator variable that equals one if more than half of a CFO's social connections are from firms that experience restatements, zero otherwise.
CEOAge	Age of a firm's CEO.
CFOAge	Age of a firm's CFO.
CEOGender	An indicator variable that equals one if a firm's CEO is female, zero otherwise.
CFOGender	An indicator variable that equals one if a firm's CFO is female, zero otherwise.
LogCEODelta	The natural logarithm of a CEO's portfolio delta. Delta is defined as dollar change in wealth associated with a 1% change in the firm's stock price.
LogCFODelta	The natural logarithm of a CFO's portfolio delta. Delta is defined in the same way as above.
LogCEOVega	The natural logarithm of a CEO's portfolio vega. Vega is defined as dollar change in wealth associated with a 0.01 change in the standard deviation of the firm's stock returns.
LogCFOVega	The natural logarithm of a CFO's portfolio vega. Vega is defined in the same way as above.
CEOHighDegree	An indicator variable that equals one if the value of *CEODegree* is greater than three times that of *CFODegree.*
CEOHighEigen	An indicator variable that equals one if the value of *CEOEigenvector* is greater than three times that of *CFOEigenvector*.
CFOHighDegree	An indicator variable that equals one if the value of *CEODegree* is smaller than that of *CFODegree*.
CFOHighEigen	An indicator variable that equals one if the value of *CEOEigenvector* is smaller than that of *CFOEigenvector.*
IndepBoard	An indicator variable that equals one if the percentage of independent outside board members is greater than 75%, zero otherwise.

APPENDIX B

EXECUTIVE OVERALL CENTRALITY

This appendix includes descriptive statistics, correlation metrics, and regression analysis for the full sample where a CEO's (CFO's) centrality is calculated in a network including *both* her within-firm connections and her connections outside her current firm. Table B1 includes the descriptive statistics for executive overall centrality. Table B2 presents correlation metrics between overall centrality and main variables used in the regression analysis. Table B3 reports the regressions analysis of the relation between executive overall centrality and corporate reporting choices.

Table B1
Summary Statistics for the Full Sample

	Mean	P25	Median	P75	Std. dev.
Centrality Variables (N=19,069)					
CEODegree	155.68	32.00	72.00	169.00	219.27
CFODegree	122.96	28.00	57.00	120.00	186.96
CEOEigenvector	0.0081	0.0000	0.0002	0.0021	0.0527
CFOEigenvector	0.0022	0.0000	0.0001	0.0014	0.0057

Table B2
Correlation Metrics

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1) *|DAccruals|*		**0.041**	**0.061**	**0.077**	**0.077**	**0.160**	**0.175**	**-0.057**	**-0.208**	**0.085**	**-0.067**	**-0.336**	**0.139**	**0.170**
2) *MBAF*	**0.015**		**0.043**	**0.061**	**0.060**	**0.083**	**0.083**	**0.091**	**-0.146**	**0.094**	-0.009	**-0.073**	**0.023**	**-0.092**
3) *Restatement*	**0.072**	**0.043**		**0.054**	**0.056**	**0.054**	**0.065**	**0.060**	**-0.035**	**-0.024**	**0.022**	**0.038**	0.005	-0.016
4) *CEODegree*	**0.058**	**0.068**	**0.063**		**0.519**	**0.870**	**0.498**	**0.469**	**-0.131**	**0.039**	**0.233**	**0.061**	**0.057**	**-0.139**
5) *CFODegree*	**0.084**	**0.069**	**0.080**	**0.529**		**0.490**	**0.841**	**0.453**	**-0.113**	**0.024**	**0.181**	**0.063**	**0.056**	**-0.133**
6) *CEOEigenvector*	**0.093**	**0.082**	**0.054**	**0.867**	**0.496**		**0.619**	**0.391**	**-0.164**	**0.044**	**0.158**	**-0.057**	**0.053**	**-0.069**
7) *CFOEigenvector*	**0.123**	**0.084**	**0.068**	**0.510**	**0.837**	**0.631**		**0.369**	**-0.163**	**0.039**	**0.115**	**-0.075**	**0.054**	**-0.054**
8) *MVE*	**0.123**	**0.139**	**0.207**	**0.330**	**0.386**	**0.276**	**0.301**		**-0.305**	**0.337**	**0.404**	**0.178**	**0.129**	**-0.461**
9) *BTM*	**-0.119**	**-0.131**	**-0.023**	**-0.114**	-0.099	**-0.143**	**-0.146**	**-0.119**		**-0.363**	**0.083**	**0.139**	**-0.213**	**0.072**
10) *ROA*	**-0.161**	**0.059**	-0.007	**0.014**	-0.009	-0.004	**-0.028**	**0.092**	**-0.135**		**0.174**	**-0.248**	**0.269**	**-0.264**
11) *FirmAge*	**-0.031**	0.004	**0.030**	**0.268**	**0.231**	**0.195**	**0.168**	**0.322**	0.006	**0.174**		**0.170**	**0.088**	**-0.325**
12) *Leverage*	**-0.160**	**-0.071**	**0.039**	**0.060**	**0.068**	**-0.066**	**-0.079**	**0.128**	**0.152**	-0.001	**0.199**		**-0.250**	**-0.218**
13) *CapitalExpenditure*	-0.008	-0.009	-0.008	**-0.048**	**-0.035**	**-0.063**	**-0.050**	**-0.017**	**-0.111**	**0.082**	-0.004	**-0.145**		**0.029**
14) *RetVolatility*	**0.120**	**-0.093**	**-0.015**	**-0.122**	**-0.112**	**-0.063**	**-0.048**	**-0.181**	**0.208**	**-0.363**	**-0.298**	**-0.150**	**0.068**	

Notes: This table presents correlation coefficients between executive overall centrality and main variables used in regression analysis. Pearson correlations are presented below the diagonal and Spearman correlations are presented above the diagonal. The sample covers a total of 19,069 firm-year observations between fiscal years 2001 and 2012. All continuous variables are winsorized at the 1st and 99th percentiles. Bold text indicates significant at the 0.05 level or better.

Table B3
Regression Analysis of Executive Overall Centrality and Misreporting

	Dependent Variables =					
	|DAccruals|		*MBAF*		*Restatement*	
	(1)	(2)	(3)	(4)	(5)	(6)
LogCEODegree	0.011***		0.232***		0.119*	
	(5.09))		(5.84)		(1.91)	
LogCFODegree	0.019***		0.336***		0.407***	
	(6.42)		(7.06)		(6.49)	
LogCEOEigenvector		0.003***		0.094***		0.016
		(3.08)		(5.11)		(0.55)
LogCFOEigenvector		0.006***		0.138***		0.163***
		(5.56)		(6.67)		(5.39)
SIZE	-0.011***	-0.008***	-0.051	-0.015	0.251***	0.314***
	(-4.37)	(-3.01)	(-1.17)	(-0.35)	(5.86)	(7.18)
BTM	-0.025***	-0.021***	-0.307***	-0.284***	0.060	0.074
	(-4.68)	(-4.30)	(-4.86)	(-4.45)	(0.75)	(0.92)
SalesGrowth	0.004**	0.004**	-0.001	0.004		
	(2.24)	(2.43)	(-0.03)	(0.10)		
ROA	-0.062**	-0.068***	0.390	0.341	-0.516	-0.687
	(-2.50)	(-2.75)	(1.15)	(1.00)	(-1.12)	(-1.50)
NumAnalyst			0.023**	0.023**		
			(2.52)	(2.47)		
AnalystDispersion			-0.189**	-0.184**		
			(-2.09)	(-2.29)		
FirmAge	0.0003	0.0004			-0.006	-0.005
	(1.48)	(1.64)			(-1.49)	(-1.22)
Leverage	-0.043***	-0.034**	-0.660***	--0.536**	1.214***	1.385***
	(-2.65)	(-2.14)	(-2.99)	(-2.43)	(4.76)	(5.35)
CapitalExpenditure	0.172***	0.177***	-1.030	-0.943	-1.587	-1.236
	(3.30)	(3.38)	(-1.13)	(-1.03)	(-1.24)	(-0.97)
RetVolatility	0.616***	0.630***	-13.164***	-13.084***	23.584***	23.500***
	(2.96)	(2.96)	(-3.08)	(-3.10)	(4.34)	(4.33)
CEOCtgDACC	0.225***	0.223***				
	(11.65)	(11.58)				
CFOCtgDACC	0.269***	0.266***				
	(16.03)	(15.73)				
CEOCtgMBAF			3.398***	3.413***		
			(28.02)	(28.53)		
CFOCtgMBAF			4.343***	4.330***		
			(34.18)	(35.33)		
CEOCtgREST					1.476***	1.429***
					(4.36)	(4.23)
CFOCtgREST					2.416***	2.400***
					(7.55)	(7.47)
Year/Industry Effects	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered by Firm	Yes	Yes	Yes	Yes	Yes	Yes
No. Obs.	19,069	19,069	19,069	19,069	19,069	19,069
R^2 (Pseudo R^2)	53.26%	52.99%	66.82%	66.75%	17.19%	16.78%

Notes: This table reports the results for regressions of reporting variables on executive overall centrality. Robust *t*-values or *z*-values (in parentheses) are based on standard errors adjusted for clustering at firm level. See Appendix A for variable definitions. All continuous variables are winsorized at the 1st and 99th percentiles. ***, **, and * denote statistical significance at the 0.01, 0.05, and 0.10 levels, respectively.

REFERENCES

Adams, R. B., H. Almeida, and D. Ferreira. 2005. Powerful CEOs and Their Impact on Corporate Performance. *Review of Financial Studies* 18 (4), 1403-1432.

Armstrong, C. S., D. F. Larcker, G. Ormazabal, and D. J. Taylor. 2013. The Relation between Equity Incentives and Misreporting: The Role of Risk-Taking Incentives. *Journal of Financial Economics* 109, 327-350.

Badolato, P., D. C. Donelson, and M. Ege. 2014. Audit Committee Financial Expertise and Earnings Management: The Role of Status. *Journal of Accounting and Economics*. Forthcoming.

Bamber, L. S., J. Jiang, and I. Wang. 2010. What's My Style? The Influence of Top Managers on Voluntary Corporate Financial Disclosure. *The Accounting Review* 85 (4), 1131-1162.

Beaman, L. and J. Magruder. 2012. Who Gets the Job Referral? Evidence from a Social Networks Experiment. *American Economic Review* 102 (7), 3574-3593.

Beyer, A., D. A. Cohen, T. Z. Lys, and B. R. Walther. 2010. The Financial Reporting Environment: Review of the Recent Literature. *Journal of Accounting and Economics* 50, 296-343.

Bizjak, J., M. Lemmon, and R. Whitby. 2009. Option Backdating and Board Interlocks. *Review of Financial Studies* 22 (11), 4821-4847.

Bonacich, P. 1972. Factoring and Weighting Approaches to Status Scores and Clique Identification. *The Journal of Mathematical Sociology* (2), 113-120.

Brown, J. 2011. The Spread of Aggressive Corporate Tax Reporting: A Detailed Examination of the Corporate-Owned Life Insurance Shelter. *The Accounting Review* 86 (1), 23-57.

Burt, R. S. 1987. Social Contagion and Innovation: Cohesion versus Structural Equivalence. *American Journal of Sociology* 92 (6), 1287-1335.

Bushman, R. and A. Smith. 2001. Financial Accounting Information and Corporate Governance. *Journal of Accounting and Economics* 32, 237-334.

Bushman, R. and J. Piotroski. 2006. Financial Reporting Incentives for Conservative

Accounting: The Influence of Legal and Political Institutions. *Journal of Accounting and Economics* 42, 107-148

Calvo - Armengol, A. 2004. Job Contact Networks. *Journal of Economic Theory* 115, 191-206.

Chidambaran, N. K., S. Kedia, and N. R. Prabhala. 2012. CEO-Director Connections and Corporate Fraud. Working Paper. Fordham University, Rutgers University, and University of Maryland.

Chiu, P. C., S. H. Teoh, and F. Tian. 2013. Board Interlocks and Earnings Management Contagion. *The Accounting Review* 88, 915-944.

Cingano, F. and A. Rosolia. 2012. People I Know: Job Search and Social Networks. *Journal of Labor Economics* 30, 291-332.

Cohen, L., A. Frazzini, and C. Malloy. 2008. The Small World of Investing: Board Connections and Mutual Fund Returns. *Journal of Political Economy* 116, 951-979.

Cohen, L. A. Frazzini, and C. Malloy. 2010. Sell-Side School Ties. *The Journal of Finance* 65, 1409-1437.

Coles, J., N. Daniel, and L. Naveen. 2006. Managerial Incentives and Risk-taking. *Journal of Financial Economics* 79, 431-468.

Collins, D., A. Masli, A. L. Reitenga, and J. M. Sanchez. 2009. Earnings Restatements, the Sarbanes-Oxley Act and the Disciplining of Chief Financial Officers. *Journal of Accounting, Auditing, and Finance* 24, 1-34.

Core, J. and W. Guay. 2002. Estimate the Value of Employee Stock Option Portfolios and Their Sensitivities to Price and Volatility. *Journal of Accounting Research* 40, 613-630.

Dechow, P. M., W. Ge, C. Larson, and R. Sloan. 2011. Predicting Material Accounting Misstatements. *Contemporary Accounting Research* 28, 17-82.

Dechow, P. M., W. Ge, and C. M. Schrand. 2010. Understanding Earnings Quality: A Review of the Proxies, their Determinants, and their Consequences. *Journal of Accounting and Economics* 50, 344-401.

DeFond, M. L. and J. Jiambalvo. 1994. Debt Covenant Violation and Manipulation of Accruals. *Journal of Accounting and Economics* 17, 145-176.

DeGeorge, F., J. Patel, and R. Zeckhauser. 1999. Earnings Management to Exceed Thresholds. *Journal of Business* 72, 1-33.

Demerjian P., B. Lev, and S. McVay. 2012. Qualifying Managerial Ability: A New Measure and Validity Tests. *Management Science* 58, 1229-1248.

Demerjian P., B. Lev, M. Lewis, and S. McVay. 2013. Managerial Ability and Earnings Quality. *The Accounting Review* 88, 463-498.

Desai, H., C.E. Hogan, and M. S. Wilkins. 2006. The Reputational Penalty for Aggressive Accounting: Earnings Restatements and Management Turnover. *The Accounting Review* 81, 83-112.

El-Khatib, R., K. Fogel, and T. Jandik. 2014. CEO Network Centrality and Merger Performance. Working Paper. University of Arkansas.

Engelberg J., P. Gao, and C. A. Parsons. 2013. The Price of a CEO's Rolodex. *Review of Financial Studies* (December) 79-114.

Faleye, O., T. Kovacs, and A. Venkateswaran. 2014. Do Better-connected CEOs Innovate More? *Journal of Financial and Quantitative Analysis* 49, 1201-1225.

Faleye, O. 2007. Classified Boards, Firm Value, and Managerial Entrenchment. *Journal of Financial Economics* 83, 501-529.

Fama, E.F. 1980. Agency Problems and the Theory of the Firm. *The Journal of Political Economy* 88 (2), 288-307.

Feng, M., W. Ge, S. Luo, and T. Shevlin. 2011. Why do CFOs Become Involved in Material Accounting Manipulations? *Journal of Accounting and Economics* 51, 21-36.

Fracassi, C. 2014. Corporate Finance Policies and Social Networks. Working paper. University of Texas Austin.

Fracassi C. and G. Tate. 2012. External Networking and Internal Firm Governance. *The Journal of Finance* 67, 153-194.

Francis, J., A. H. Huang, S. Rajgopal, and A. Y. Zang. 2008. CEO Reputation and Earnings Quality. *Contemporary Accounting Research* 25, 109-147.

Freeman, L. 1979. Centrality in Social Networks Conceptual Clarification. *Social Networks* (1), 215-239.

Ge, W., D. Matsumoto, and J. L. Zhang. 2011. Do CFOs Have Styles? An Empirical Investigation of the Effects of Individual CFOs on Accounting Practices? *Contemporary Accounting Research* 28, 1141-1179.

Geiger, M. and D. North. 2006. Does Hiring a New CFO Change Things? An Investigation of Changes in Discretionary Accruals. *The Accounting Review* 81, 781-809.

Granovetter, M. 1974. Getting a Job: A Study of Contacts and Careers. Harvard University Press, Cambridge, MA.

Graham, J., C. Harvey, and S. Rajgopal. 2005. The Economic Implications of Corporate Financial Reporting. *Journal of Accounting and Economics* 40, 3-73.

Hanneman, R. A., and M. Riddle. 2005. Introduction to Social Network Methods. Riverside, CA: University of California, Riverside (published in digital form athttp://faculty.ucr.edu/~hanneman/)

Hartzell, J. C., E. Ofek, and D. Yermack. 2004. What's In It for Me? CEOs Whose Firms Are Acquired. *Review of Financial Studies* 17, 37-61.

Hennes, K., A. Leone, and B. Miller. 2008. The Importance of Distinguishing Errors from Irregularities in Restatement Research: The Case of Restatements and CEO/CFO Turnover. *The Accounting Review* 83, 1487-1519.

Huang, H., E. Rose-Green, and C. Lee. CEO Age and Financial Reporting Quality. *Accounting Horizons* 26, 725-740.

Hwang, B. and S. Kim. 2009. It Pays to Have Friends. *Journal of Financial Economics* 93, 138-158.

Hwang, B. and S. Kim. 2012. Social Ties and Earnings Management. Working paper. Purdue University.

Ibarra, H. and S. B. Andrews. 1993. Power, Social Influence, and Sense Making: Effects of Network Centrality and Proximity on Employee Perceptions. *Administrative Science Quarterly* 38 (2), 277-303.

Ibarra, H. 1993. Network Centrality, Power, and Innovation Involvement: Determinants of Technical and Administrative Roles. *Academy of Management Journal* 36 (3), 471-501.

Ioannides, Y. M. and L. Datcher-Loury. 2004. Job Information Networks, neighborhood Effects and Inequality. *Journal of Economics Literature* 424, 1056-1093.

Jackson, M. O. and B. W. Rogers. 2007. Meeting Strangers and Friends of Friends: How Random are Social Networks? *American Economic Review* 97 (3), 890-915.

Jackson, M. O. 2009. Networks and Economic Behavior. *Annual Review of Economics* 1, 489-513.

Jiang, J., K. Petroni, and I. Wang. 2010. CFOs and CEOs: Who Have the most Influence on Earnings Management? *Journal of Financial Economics* 96, 513-526.

Karpoff, J. M., D. S. Lee, and G. S. Martin. 2008. The Consequences to Managers for Financial Misrepresentation. *Journal of Financial Economics* 88, 193-215.

Khanna, V., E. H. Kim, and Y. Lu. 2015. CEO Connectedness and Corporate Frauds. *Journal of Finance*. Forthcoming.

Klein, A. 2002. Audit Committee, Board of Director Characteristics, and Earnings Management. *Journal of Accounting and Economics* 33, 375-400.

Kothari, S., A. Leone, and C. Wasley. 2005. Performance Matched Discretionary Accrual Measures. *Journal of Accounting and Economics* 39, 163-197.

Larcker, D., E. So, and C. Wang. 2013. Boardroom Centrality and Firm Performance. *Journal of Accounting and Economics* 16, 273-316.

Lee, S., S. R. Matsunaga, and C. W. Park. 2012. Management Forecast Accuracy and CEO

Turnover. *The Accounting Review* 87, 2095-2122.

Lee, C., L. Li, and Y. Heng. 2006. Performance, Growth and Earnings Management. *Review of Accounting Studies* 11, 305-334.

Lin, N. 1999. Building a Network Theory of Social Capital. *Connections* 22, 28-51.

Lin, N., J. C. Vaughn, and W. Ensel. 1981. Social Resources and Occupational Status Attainment. *Social Forces* 59, 1163-1181.

Liu, Y. 2010. The Role of Networks in the CEO and Director Labor market. Dissertation. University of Maryland.

Low, A. 2009. Managerial Risk-taking Behavior and Equity-based Compensation. *Journal of Financial Economics* 92, 470-490.

Malmendier, U. and G. Tate. 2009. Superstar CEOs. *The Quarterly Journal of Economics* 77 (3), 483-514.

Matsumoto, D. A. 2002. Management's Incentives to Avoid Negative Earnings Surprises. *The Accounting Review* 77, 483-514.

McVay, S., V. Nagar, and V. W. Tang. 2006. Trading Incentives to Meet the Analysts Forecasts. *Review of Accounting Studies* 11, 575-598.

Mian, S. 2001. On the Choice and Replacement of Chief Financial Officer. *Journal of Financial Economics* 60, 143-175.

Mizruchi, M. S., and B. B. Potts. 1998. Centrality and Power Revisited: Actor Success in Group Decision Making. *Social Networks* 20, 353-387.

Montgomery, J. D. 1991. Social Networks and Labor-Market Outcomes: Toward an Economic Analysis. *The American Economic Review* 81, 1408-1418.

Murphy, K. and J. Zimmerman. 1993. Financial Performance surrounding CEO Turnover. *Journal of Accounting and Economics* 55, 225-250.

Peters, F. S. and A. F. Wagner. 2014. The Executive turnover Risk Premium. *Journal of Finance* 69, 1529-1563.

Schrand, C. and S. Zechman. 2012. Executive Overconfidence and the Slippery Slope to Financial Misreporting. *Journal of Accounting and Economics* 53, 311-329.

Yermack, D. 1996. Higher Market Valuation of Companies with a Small Board of Directors. *Journal of Financial Economics* 40, 185-211.